

# MOSERS



Missouri State Employees' Retirement System  
A Component Unit of the State of Missouri  
Comprehensive Annual Financial Report  
Fiscal Year Ended June 30, 1998

MO. DEP. OF  
UMR

JAN 04 1998

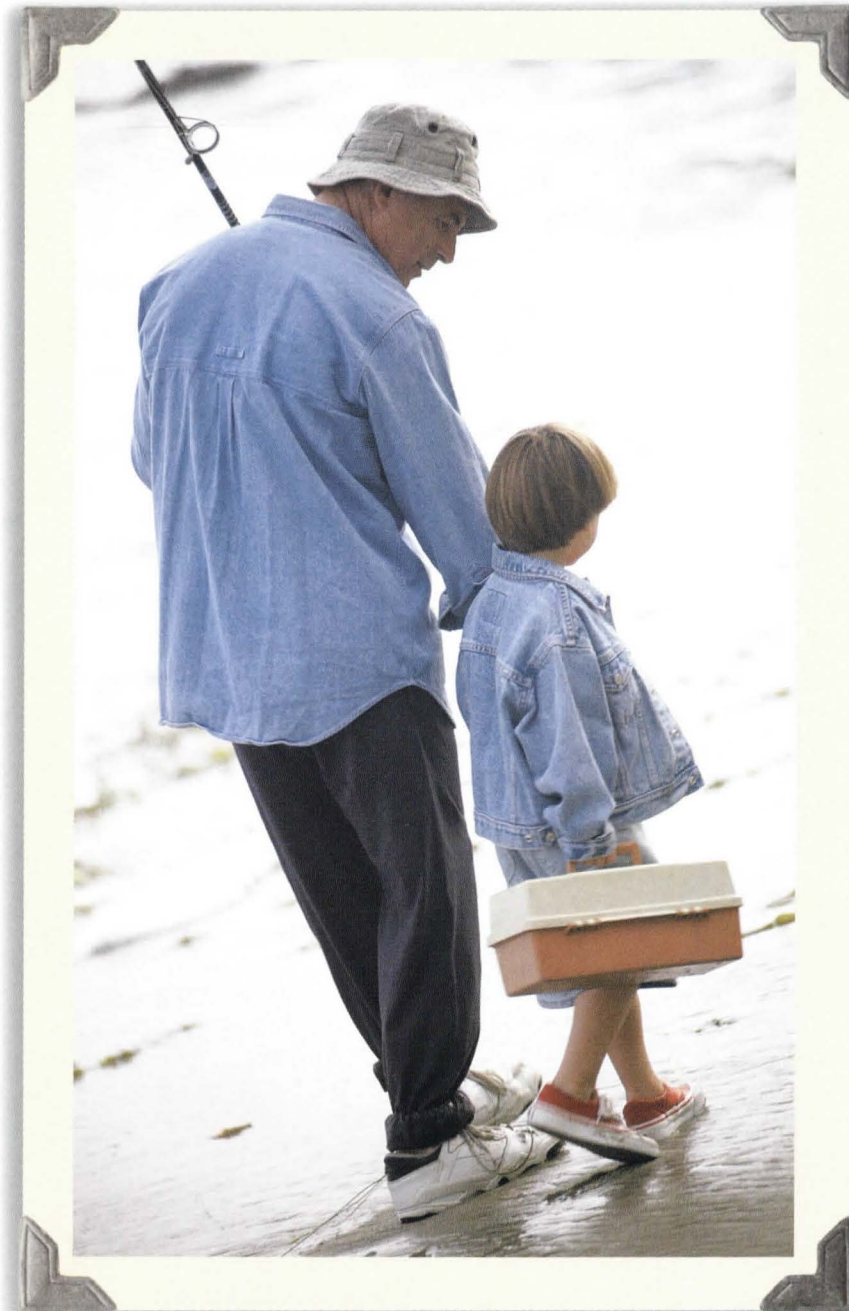


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Comprehensive Annual Financial Report

Fiscal Year Ended June 30, 1998



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U M R

JAN 04 1998

Gary Findlay  
Executive Director

Gary Irwin  
Chief Financial Officer



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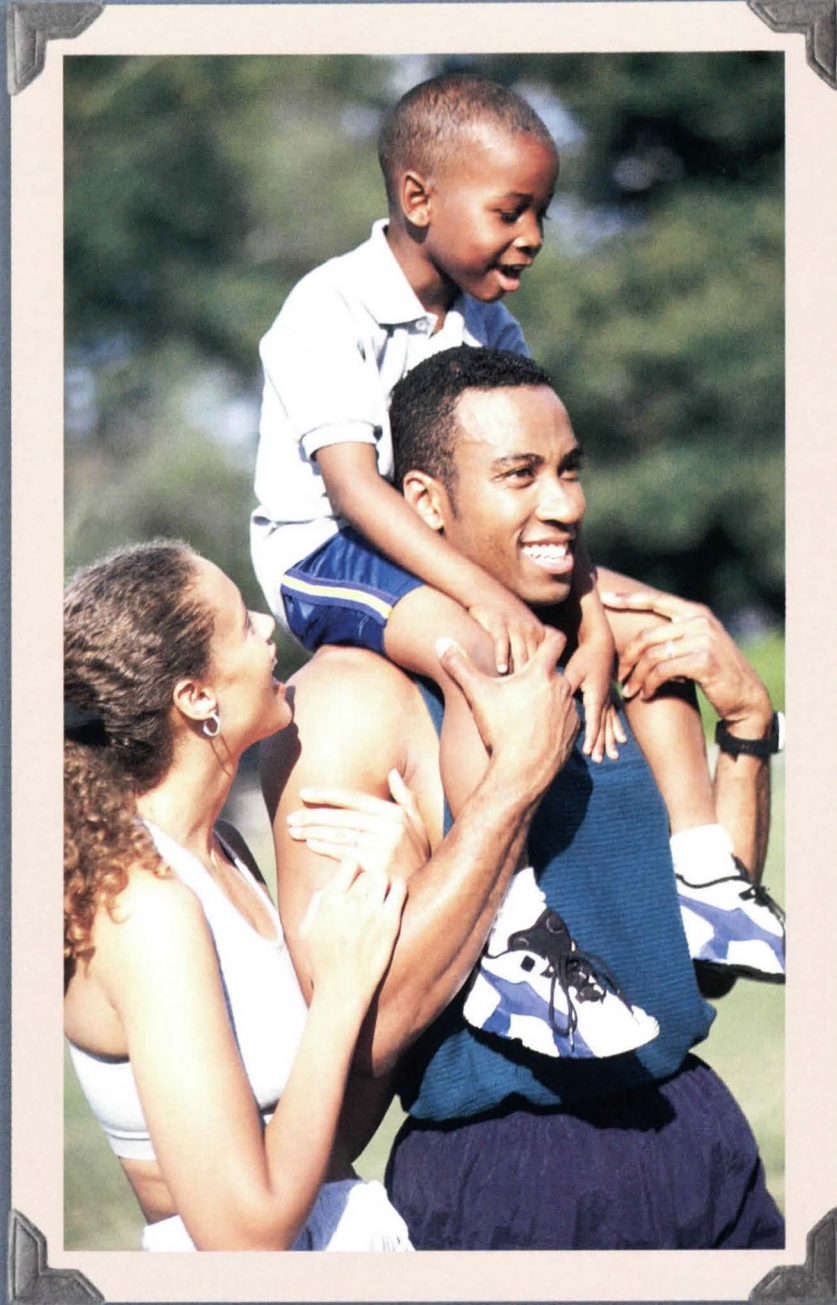
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\* Missouri State Employees' Plan

\*\* Administrative Law Judges' and Legal Advisors' Plan



# INTRODUCTORY SECTION



*Saving a dollar today  
makes for easy payments later.*









*Board of Trustees*

*Thomas Hodges  
Chairman*

*Bob Holden  
Vice Chairman*

*Joseph Bednar*

*Rep. Richard Franklin*

*Richard Hanson*

*Donald Martin*

*Bryan Ornburn*

*Sen. John Russell*

*Sen. John Scott*

*Rep. Bill Skaggs*

*Jacquelyn White*

*Gary Findlay  
Executive Director*

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*[www.mosers.org](http://www.mosers.org)*

*Gary Findlay  
Executive Director*

September 1, 1998

The Board of Trustees  
Missouri State Employees' Retirement System  
907 Wildwood Drive  
Jefferson City, MO 65109

Dear Board Members:

It is with great pleasure that I submit this year's annual report of the Missouri State Employees' Retirement System (MOSERS). A significant milestone was reached this year as we moved into our new facility at 907 Wildwood Drive. (We have come a long way since our early days when we occupied temporary space in a small motel in Jefferson City.) Our goal with the new facility was to develop a customer friendly environment which would facilitate workflow, provide pleasant surroundings for employees, meet our space needs, and allow for future expansion. Our move to 907 Wildwood, in March of this year, was the culmination of a two-year project of planning and construction which was completed on schedule and under budget and which, in my view, meets all of the objectives established at the outset of the project.

*Report Contents and Structure*

MOSERS is considered a component unit of the state of Missouri for financial reporting purposes and, as such, the financial statements contained in this report are also included in the State of Missouri Comprehensive Annual Financial Report. The financial information presented in this report is the responsibility of the management of MOSERS, and sufficient internal accounting controls exist to provide reasonable assurance regarding the safekeeping of assets and fair presentation of the financial statements, supporting schedules, and statistical tables. The report is also designed to comply with the reporting requirements of Sections 104.480 and 105.661 of the Revised Statutes of Missouri (RSMo) as amended. For ease of use, the report has been divided into the following five sections:



- ◆ The introductory section which contains general information regarding the operations of MOSERS.
- ◆ The financial section which contains the financial statements, schedules, and supplementary financial information regarding the funds administered by MOSERS.
- ◆ The investment section which contains information pertaining to the management of the investments of the pension trust funds.
- ◆ The actuarial section which contains information regarding the financial condition and financial position of the retirement plans administered by the system.
- ◆ The statistical section which contains general statistical information regarding system participants and finances.

#### *Summary of Financial Information*

The following schedule presents the pension trust funds' additions and deductions for the years ended June 30, 1998, and June 30, 1997.

	<u>June 30, 1998</u>	<u>June 30, 1997</u>
Additions	\$ 828,270,884	\$ 816,173,392
Deductions	<u>(165,904,834)</u>	<u>(143,671,618)</u>
Net Increase	\$ 662,366,050	\$ 672,501,774

The additions increased by \$12,097,492, primarily as the result of an increase in net investment income of \$7,522,390 and increased contributions of \$4,795,454. The deductions increased by \$22,233,216, primarily as the result of the one-time benefit adjustment payments of \$8,453,580 in connection with the passage of House Bill 356 in 1997 and an increase of \$14,910,301 in benefit payments.

The following schedule presents a summary of the revenues and expenses of the internal service fund (insurance activity) for the years ended June 30, 1998, and June 30, 1997.

	<u>June 30, 1998</u>	<u>June 30, 1997</u>
Operating revenues	\$ 17,143,618	\$ 16,635,532
Operating expenses	(17,190,990)	(16,619,123)
Non-operating revenues	<u>58,889</u>	<u>50,608</u>
Net revenues over expenses	\$ 11,517	\$ 67,017

Operating revenues increased by \$508,086, primarily as the result of an increase of \$464,351 in premium receipts. Operating expenses increased by \$571,867, primarily as the result of an increase of \$453,417 in premium disbursements and an increase of \$107,515 in administrative expenses. Non-operating revenues increased by \$8,281 as the result of increased investment income.

#### *Plan Financial Condition*

The funding objective of MOSERS' pension trust funds is to meet long-term benefit promises through contributions which remain approximately level as a percent of member payroll over decades of time. Historical information relating to progress in meeting this objective is presented on pages 32-35. During the year ended June 30, 1998, the funded ratio of the Missouri State Employees' Plan, which covers 81,280 participants, increased from 79.9% to 85.6%, primarily as the result of favorable investment returns. The funded ratio of the Administrative Law Judges' and Legal Advisors' Plan, which covers 79 participants, increased from 77.6% to 79.8%, primarily as the result of favorable investment returns. Additional information regarding the financial condition of the pension trust funds can be found in the actuarial section of this report.

#### *Investment Activity*

During the year ended June 30, 1998, MOSERS' pension trust funds' investments produced a total return of 17.1% net of expenses. For the three years ended June 30, 1998, the fund has grown at nearly 18% per year. On just two other occasions, since MOSERS began operations in 1957, has the asset base grown so dramatically in any three-year period. During the year, the fund spent approximately \$7.5 million for management of system assets. This was nearly \$8.75 million less than

the median fund in our peer group. The Board of Trustees continued to expand the internal management program by transferring responsibility for management of the S&P 500 portfolio and the money market portfolio to internal staff. Additional detail regarding this and other investment activity of the fund may be found in the investment section of this report.

#### *Legislation Enacted During the 1998 Legislative Session*

On July 13, 1998, Governor Mel Carnahan signed into law House Bill 971. This legislation requires the state to assume financial responsibility for juvenile court personnel employed in multi-county circuits. Governor Carnahan also signed Senate Bill 910 on that date – legislation which revises several retirement provisions relating to the collection of child support and maintenance. These provisions are described in more detail on page 83 of this report.

#### *Certificate of Achievement for Excellence in Financial Reporting*

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to MOSERS for its comprehensive annual financial report for the fiscal year ended June 30, 1997. The certificate of achievement is a prestigious national award recognizing conformance with the highest standards for preparation of state and local government financial reports. In order to be awarded a certificate of achievement, a governmental unit must publish an easily readable and efficiently organized comprehensive annual financial report (CAFR) conforming to program standards. The CAFR must satisfy both generally accepted accounting principles and applicable legal requirements. A certificate of achievement is valid

for a period of one year only. MOSERS has received a certificate of achievement for the last nine consecutive years (fiscal years ended 1989-1997). We believe our current report continues to conform to the certificate of achievement program requirements, and we are submitting it to GFOA for evaluation.

#### *Conclusion*

This report is a product of the combined efforts of the MOSERS' staff and advisors functioning under your leadership. It is intended to provide complete and reliable information which will facilitate the management decision process, serve as a means for determining compliance with legal requirements, and allow for the evaluation of responsible stewardship of the funds of the system. As in the past, MOSERS received an unqualified opinion from our independent auditors on the financial statements included in this report. The opinion of the independent auditors can be found on page 20.

Copies of this report are provided to the Governor, the State Auditor, the Joint Committee on Public Employee Retirement of the Missouri General Assembly, and all state agencies. These agencies form the link between MOSERS and its members – their cooperation contributes significantly to the success of MOSERS. We hope that all recipients of this report find it to be both informative and useful.

I would like to take this opportunity to express my gratitude to you, to the staff, to the advisors, to the Governor's Task Force on Total Compensation, and to the other people who have worked so diligently to assure the continued successful operation of the system.

Respectfully submitted,

  
Gary Findlay  
Executive Director





MOSERS moved to its new facility at 907 Wildwood Drive in March 1998. The building was specifically designed for MOSERS to improve the potential for providing quality customer service and to satisfy the organization's growing space needs. MOSERS initiated the planning and design of the project in 1996 with Simon Walther, Inc. (SWI), an architectural and interior design firm based in Columbia, Missouri. SWI provided total design services for the project. Kidwell Construction, of Kingdom City, Missouri, was awarded the construction contract in March 1997.

Building decisions were guided by the project's mission statement which was based, first, on providing plan participants with a welcoming, professional environment favorable to planning for retirement (privacy was a primary factor in addressing the

confidentiality needs of our members); and secondly, to provide employees with efficient and pleasant working surroundings which facilitate productivity, workflow, and communication – while incorporating technology, natural light, and open space in the structure. Quality and value were highly emphasized in that philosophy.

The building is approximately 27,000 square feet and is situated on three acres. The heavily wooded and sloping site was conducive to the design of a large main level office and a smaller lower level for support services. The building is steel framed and has a pre-cast concrete exterior with a textured base and barrel-vaulted roofs at the entrances. The building was designed with a multi-purpose meeting room which allows for onsite training and seminars as well as board meetings.





*Board of Trustees*

*Thomas Hodges  
Chairman*

*Bob Holden  
Vice Chairman*

*Joseph Bednar*

*Rep. Richard Franklin*

*Richard Hanson*

*Donald Martin*

*Bryan Ornburn*

*Sen. John Russell*

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*www.mosers.org*

*Thomas Hodges  
Board Chairman*

September 1, 1998

Dear Members:

On behalf of the Board of Trustees, I am pleased to present the MOSERS' Comprehensive Annual Financial Report for the fiscal year ended June 30, 1998. Beyond providing information on the financial status and investment activity of the plan, this report is one of our most important vehicles for communicating with plan members. Toward that end, it is our hope that you find the report format easy to use and the information to be relevant.

The performance of the financial markets, coupled with the asset allocation of the fund, led to strong investment returns for fiscal year 1998. This exceptional performance, in turn, led to a significant increase in the funding ratio of the plan, as is outlined in the financial section of this report. In summary, your retirement system is well funded, and the decisions of the Board of Trustees and MOSERS' staff have resulted in a very successful investment program.

During this past year, the Board of Trustees' membership changed with the departure of Janette Lohman and the addition of Jackie White. Many positive changes were witnessed during the five years that Janette served as a trustee, and her dedication to our plan members was very evident in her decision making. We will miss working with Janette but look forward to working with Jackie in the coming years.

In closing, I wish to thank the staff at MOSERS for their dedicated service. I am continually impressed, as are the other members of the board, with the professionalism, the commitment to our mission, and the customer focus displayed by all the employees at MOSERS. Their extra effort is greatly appreciated.

Sincerely,

Tom Hodges, Chairman  
Board of Trustees





## *Board of Trustees*

**Richard Hanson**  
 Commissioner of Administration  
 Ex-Officio Member  
*Benefits Committee*  
*Investment Committee*  
*Investment Oversight Committee*

**Donald Martin**  
 Associate Professor of Accounting  
 Central Missouri State University  
 Elected Active Member  
*Benefits Committee*  
*Investment Oversight Committee*

**Thomas Hodges - Chairman**  
 Probation Officer  
 Probation and Parole  
 Elected Active Member

**Senator John Russell**  
 Senate Member  
*Operations Committee* ★  
*Investment Committee*

**Jacquelyn White**  
 Deputy Director, Department of Mental Health  
 Governor Appointed Member  
*Operations Committee*  
*Investment Oversight Committee*





**Senator John Scott**  
Senate Member  
*Investment Committee*  
*Investment Oversight Committee*

**Representative Bill Skaggs**  
House of Representatives Member  
*Benefits Committee*  
*Investment Committee* ★  
*Investment Oversight Committee*

**Joseph Bednar**  
Governor's Office  
Governor Appointed Member  
*Benefits Committee*  
*Operations Committee*

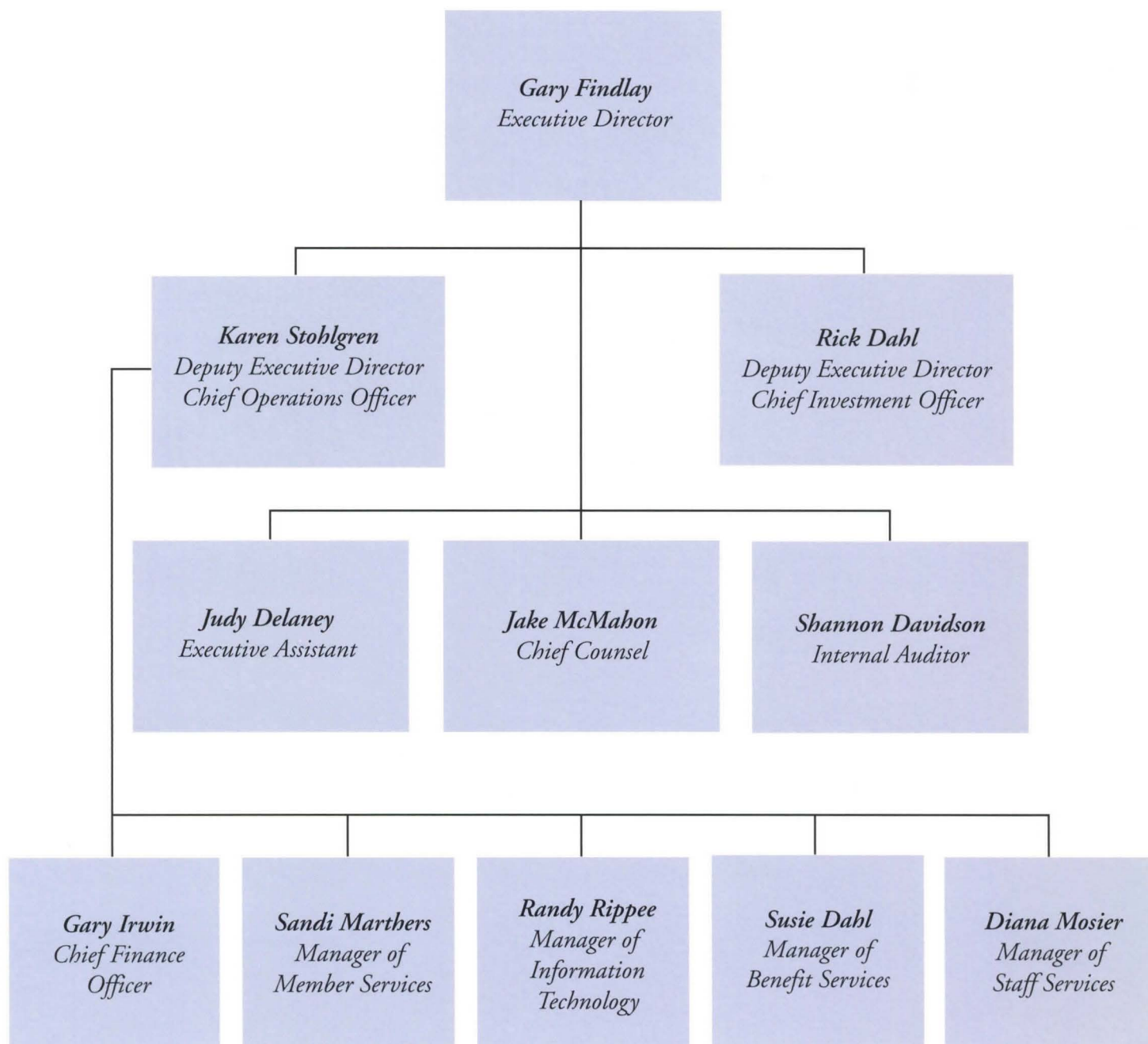
**Representative Richard Franklin**  
House of Representatives Member  
*Benefits Committee* ★  
*Investment Committee*  
*Operations Committee*

**Bob Holden - Vice Chairman**  
State Treasurer  
Ex-Officio Member  
*Investment Committee*  
*Investment Oversight Committee* ★  
*Operations Committee*

**Bryan Ornburn**  
Elected Retired Member  
*Benefits Committee*  
*Investment Committee*  
*Operations Committee*

★ Denotes committee chairman









## *Administrative Staff*

*Pictured left to right:* Randy Rippee, Diana Mosier, Jake McMahon, Gary Irwin, Gary Findlay, Karen Stohlgren, Rick Dahl, Judy Delaney, Shannon Davidson, Susie Dahl, Sandi Marthers





## *Executive Services*

Karen Stohlgren, Jake McMahon, Gary Findlay,  
Shannon Davidson, Judy Delaney



## *Accounting*

Martha Francis, Melissa Holzbierlein, Michele Nix, Gary Irwin



## *Staff Services*

Vanessa Pogue Serio, Maggie Rush, Jeff Goins  
Diana Mosier, Jerry Hihn, Lori Leeper, Jackie Kennedy



## *Information Technology*

Standing: Randy Woods, Gary Hutingler,  
Randy Rippee, Louis Bremer, Mark Howard  
Seated: Michelle Shikles, Kawajalyn Simmons, Barbara Bosch  
Not pictured: Karen Raithel



# MOSERS'





## *Communications*

Standing: Deb Benton, Pam Henry, Susie Dahl  
Paul Rockers, Tracy Upschulte  
Seated: Denise Weaver, Betty Sutterfield



## *Membership Services*

Standing: Beverly Murphy, Gina Kunz, Sandi Marthers  
Juanita Libbert, Lori Bentlage  
Seated: Sally Hager, Wanda Verdor, Hazel Bledsoe  
Not pictured: Beckie Chatman



## *Investments*

Pat Neylon, W. D. Allen, Angela Swanigan,  
Rick Dahl, Karen Holterman, John Brandt, Jim Mullen



## *Benefit Services*

Standing: Gary Hollis, Scott Simon, Susie Dahl  
Marc Webb, Kim Alspach  
Seated: Tricia Mingucci, Bette Rovik, Anne Rapp  
Not pictured: Becky Wolfe

# SCRAPBOOK



The Missouri State Employees' Retirement System (MOSERS), established September 1, 1957, is governed by the statutes of the state of Missouri.

### *Purpose*

MOSERS provides retirement, survivor, and disability benefits and life insurance to its members.

MOSERS administers retirement benefits for most state employees, including members of the water patrol, members of the Missouri General Assembly, and statewide elected officials. MOSERS is responsible for administering the law in accordance with the expressed intent of the Missouri General Assembly and bears a fiduciary obligation to the state employees who are its members and beneficiaries.

### *Mission*

To play an integral role in the future financial security of plan participants by promptly and courteously delivering quality benefits and information which members value and trust through professional plan administration and prudent management of system assets.

### *Administration*

The statutes provide that the administration of MOSERS shall be vested in an eleven member board of trustees. The board is comprised of:

- ◆ Two members of the Senate appointed by the President Pro Tem of the Senate;
- ◆ Two members of the House appointed by the Speaker of the House;
- ◆ Two members appointed by the Governor;
- ◆ Three other members of the system: two active members elected by the active and terminated-vested members, and one retiree elected by the retired members;
- ◆ The State Treasurer; and
- ◆ The Commissioner of Administration.

The day to day management of MOSERS is delegated to the executive director who is appointed by the board and serves at its pleasure. The executive director acts as advisor to the board on all matters pertaining to the system and, with the approval of the board, contracts for professional services and employs the remaining staff needed to operate the system.



### *Organization*

The executive director, deputy executive director – chief operations officer, and the deputy executive director – chief investment officer, are responsible for planning, organizing, and administering the operations of the system under the broad policy guidance and direction of the board.

MOSERS' office is divided into seven administrative sections that perform specific functions for the system.

### *Executive Services*

The executive services team provides administrative support by assisting the executive director and chief operations officer in the major legal, operational, and oversight functions of the retirement, benefit, and communication programs.

### *Accounting*

This section is responsible for all financial records of the programs administered by MOSERS, including the preparation of financial and statistical reports. Accounting performs the purchasing functions for MOSERS and interfaces with the investment consultant, investment managers, Office of Administration accounting, various payroll/personnel departments, and accounting offices of life insurance companies, actuaries, banks, and the IRS.

### *Benefit Services*

Benefit services is responsible for all contact with the membership regarding the benefit programs administered by MOSERS which include retirement, life insurance, and long-term disability. This section is comprised of our customer service and technical support teams and communications.

### *Information Technology*

Utilizing an IBM AS400 minicomputer and high end workstations, information technology provides all computer and technical design support for MOSERS' programs. This group is responsible for establishing and updating computer programs to implement plan changes and also maintains members' folder information on FileNet – an optical disk image system that allows information to be stored and processed using computer displayed images of original documents. Information technology is also responsible for administration of the personal computer network and the telephone system.

### *Investments*

The investment staff provides internal investment management and consulting services to the board and the executive director. The primary functions of staff include analyzing and rebalancing the overall asset allocation and portfolio structure, managing portions of the portfolio, providing technical advice, screening and monitoring external managers, serving as a liaison to the investment community, and informing and advising the board and executive director on financial, economic, and political developments which may affect the system. The investment staff also works with the asset consultant on a project specific basis.

### *Member Services*

Member services is responsible for establishing and maintaining all membership records – including maintenance of the data on the electronic imaging system, balancing payroll deductions for insurance, and verification of all payroll, service, and leave data which is entered into the system's computerized database.

### *Staff Services*

Staff services provides all clerical support to MOSERS' personnel. Human resources is also represented in this section.

Actuary

**Gabriel, Roeder, Smith & Co.**  
**Actuaries and Consultants**  
Tom Cavanaugh, Mike Falco  
Northport, New York

Auditors

**KPMG Peat Marwick LLP**  
**Certified Public Accountants**  
Ted Flom  
St. Louis, Missouri

Master Trustee/Custodian

**Bankers Trust Company of the Southwest**  
Douglas Womack  
Houston, Texas

Equity Investment Advisors

**American Re Asset Management**  
Patrick Tuohy, Sandi Sweeney  
Florham Park, New Jersey

**Bankers Trust Company**  
**Global Investment Management**  
Rick Vella  
New York, New York

**Capital Guardian Trust**  
Mike Nyeholt, Mike Erickson  
Los Angeles, California

**Kennedy Capital Management**  
Richard Anderson, Dick Sinise  
St. Louis, Missouri

**Morgan Grenfell**  
**Investment Services Limited**  
Jack Gastler, Neil Jenkins  
London, England

**Silchester International Investors**  
Christopher Cowie, Stephen Butt  
London, England

**Wilshire Associates, Inc.**  
Mike Napoli Jr., Tom Stevens  
Santa Monica, California

**Woodford Gayed Management, Inc.**  
Peggy Woodford Forbes, Michael Gayed  
New York, New York

**Zak Capital, Inc.**  
Suzanne Zak  
Minneapolis, Minnesota

Fixed Income Investment Advisors

**BlackRock Financial Management, Inc.**  
Hugh Frater, Keith Anderson  
New York, New York

**Hoisington Investment Management Company**  
Van Hoisington  
Austin, Texas

Investment Management Consultant

**Summit Strategies, Inc.**  
Steve Holmes, Charlie Holmes  
St. Louis, Missouri

Legal Counsel

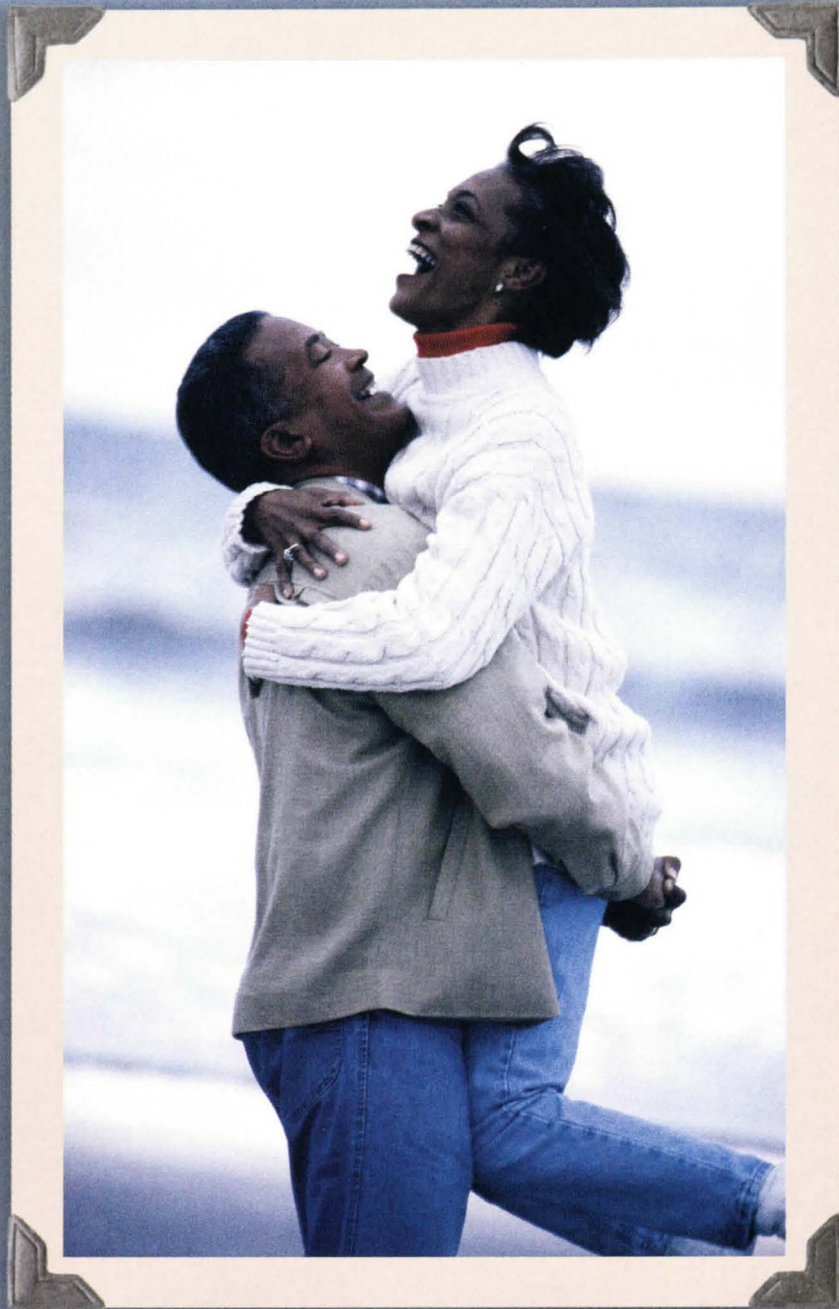
**Thompson Coburn**  
**Attorneys at Law**  
Allen Allred, Tom Litz  
St. Louis, Missouri

Risk Management Consultant

**Charlesworth & Associates, L.C.**  
Art Charlesworth, Bob Charlesworth  
Overland Park, Kansas



# FINANCIAL SECTION



*A hug is the perfect gift -  
let peace of mind be the rest.*





10 South Broadway  
Suite 900  
St. Louis, MO 63102-1761

Telephone 314 444 1400

Fax 314 444 1470

August 28, 1998

The Board of Trustees  
Missouri State Employees' Retirement System  
907 Wildwood Drive  
Jefferson City, MO 65109

Dear Board Members:

We have audited the financial statements of the Missouri State Employees' Retirement System, a component unit of the state of Missouri, as of and for the year ended June 30, 1998, as listed in the accompanying table of contents. These financial statements are the responsibility of the retirement system's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements of the Missouri State Employees' Retirement System's pension trust funds present fairly, in all material respects, the plan net assets as of June 30, 1998, and the related changes in plan net assets for the year then ended in conformity with generally accepted accounting principles. Also in our opinion, the financial statements of the Missouri State Employees' Retirement System's internal service fund present fairly, in all material respects, its financial position as of June 30, 1998, and the results of its operations and its cash flows for the year then ended in conformity with generally accepted accounting principles.

Our audit was made for the purpose of forming an opinion on the financial statements taken as a whole. The supplementary schedules of funding progress and employer contributions on pages 32 through 35 are not a required part of the basic financial statements of the Missouri State Employees' Retirement System, but are required by the Governmental Accounting Standards Board. The supplementary information included in pages 36 through 40 is presented for purposes of additional analysis and is not a required part of the basic financial statements of the Missouri State Employees' Retirement System. Such information, included on pages 32 through 40, has been subjected to the auditing procedures applied in the audit of the financial statements and, in our opinion, is fairly stated in all material respects in relation to the financial statements taken as a whole.

*KPMG Peat Marwick LLP*



Member Firm of Klynveld Peat Marwick Goerdeler



## Missouri State Employees' Retirement System

*Statements of Plan Net Assets**Pension Trust Funds*

As of June 30, 1998

	Missouri State Employees' Plan	Administrative Law Judges' and Legal Advisors' Plan	Judicial Plan	Total (Memorandum Only)
<b>Assets</b>				
Cash and short-term investments	\$ 115,325,040	\$ 281,362	\$ 0	\$ 115,606,402
<u>Receivables</u>				
State contributions	12,824,096	45,073	0	12,869,169
State reimbursements	0	0	981,598	981,598
Due from other plan	981,598	0	0	981,598
Investment income	22,874,523	55,808	0	22,930,331
Investment sales	169,070,205	412,485	0	169,482,690
Other	84,912	207	0	85,119
Total receivables	205,835,334	513,573	981,598	207,330,505
<u>Investments, at fair value</u>				
U.S. Treasury securities	528,432,183	1,289,231	0	529,721,414
Corporate bonds	363,062,193	885,773	0	363,947,966
Government bonds & Gov't mortgage-backed securities	371,072,900	905,317	0	371,978,217
Real estate equity	6,807,558	16,609	0	6,824,167
Common stock	2,293,616,834	5,595,800	0	2,299,212,634
International EAFE index fund	349,775,952	853,358	0	350,629,310
Preferred stock	2,921,360	7,127	0	2,928,487
Convertible bonds	2,552,208	6,227	0	2,558,435
Venture capital	403,218	984	0	404,202
Closed end-real estate fund	1,529,411	3,731	0	1,533,142
Guaranteed investment contracts	4,030,983	9,834	0	4,040,817
Collateralized mortgage obligation	35,004,670	85,402	0	35,090,072
Foreign currency	4,438,717	10,829	0	4,449,546
International equities	462,144,743	1,127,507	0	463,272,250
U.S. dollar denominated international corporate bonds	11,007,629	26,856	0	11,034,485
Total investments	4,436,800,559	10,824,585	0	4,447,625,144
Securities lending collateral	330,805,962	807,077	0	331,613,039
<u>Fixed assets</u>				
Land	199,865	488	0	200,353
Building and building improvements	4,274,766	10,429	0	4,285,195
Furniture, fixtures, and equipment	2,552,532	6,227	0	2,558,759
	7,027,163	17,144	0	7,044,307
Accumulated depreciation	(1,873,520)	(4,571)	0	(1,878,091)
Total fixed assets	5,153,643	12,573	0	5,166,216
Prepaid expenses and other	11,406	28	0	11,434
Total assets	5,093,931,944	12,439,198	981,598	5,107,352,740
<b>Liabilities</b>				
Administrative expense payables	2,169,691	5,293	0	2,174,984
Due to other plan	0	0	981,598	981,598
Investment purchases	179,253,272	437,329	0	179,690,601
Securities lending collateral	330,754,845	806,952	0	331,561,797
Real estate security deposits	43,657	107	0	43,764
Employee vacation liability	127,798	312	0	128,110
Total liabilities	512,349,263	1,249,993	981,598	514,580,854
Net assets held in trust for pension benefits (A schedule of funding progress for each plan is presented on page 32.)	\$ 4,581,582,681	\$ 11,189,205	\$ 0	\$ 4,592,771,886

See accompanying *Notes to the Financial Statements*.



Missouri State Employees' Retirement System  
*Statements of Changes in Plan Net Assets*  
*Pension Trust Funds*  
Year Ended June 30, 1998

	Missouri State Employees' Plan	Administrative Law Judges' and Legal Advisors' Plan	Judicial Plan	Total (Memorandum Only)
<b>Additions</b>				
<u>Contributions</u>				
State contributions	\$ 152,090,687	\$ 564,295	\$ 0	\$ 152,654,982
Member purchases of service credit	1,035,738	0	0	1,035,738
State reimbursement of non-funded benefits	0	0	11,433,457	11,433,457
Employer contributions service transfers	36,908	0	0	36,908
Total contributions	153,163,333	564,295	11,433,457	165,161,085
<u>Investment income</u>				
<i>From investing activities</i>				
Net appreciation in fair value of investments	532,718,193	1,299,724	0	534,017,917
Interest	84,788,935	206,868	0	84,995,803
Dividends	48,248,465	117,717	0	48,366,182
Other	199,706	487	0	200,193
Total investing activity income	665,955,299	1,624,796	0	667,580,095
Investment activity expenses:				
Management fees	(5,324,361)	(12,990)	0	(5,337,351)
Custody fees	(499,532)	(1,219)	0	(500,751)
Consultant fees	(203,723)	(497)	0	(204,220)
Performance measurement fees	(67,186)	(164)	0	(67,350)
Total investment activity expenses	(6,094,802)	(14,870)	0	(6,109,672)
Net income from investing activities	659,860,497	1,609,926	0	661,470,423
<i>From securities lending activities</i>				
Securities lending income	21,912,371	53,462	0	21,965,833
Securities lending expenses:				
Borrower rebates	(19,608,918)	(47,842)	0	(19,656,760)
Management fees	(682,992)	(1,666)	0	(684,658)
Total securities lending expenses	(20,291,910)	(49,508)	0	(20,341,418)
Net income from securities lending activities	1,620,461	3,954	0	1,624,415
Total net investment income	661,480,958	1,613,880	0	663,094,838
Miscellaneous income	14,925	36	0	14,961
Total additions	814,659,216	2,178,211	11,433,457	828,270,884
<b>Deductions</b>				
Benefits	140,808,101	677,213	11,433,457	152,918,771
Benefit adjustments	8,453,580	0	0	8,453,580
Contribution refunds	1,514	0	0	1,514
Administrative expense	4,500,944	10,981	0	4,511,925
Legal settlement expense	18,998	46	0	19,044
Total deductions	153,783,137	688,240	11,433,457	165,904,834
Net increase	660,876,079	1,489,971	0	662,366,050
Net assets held in trust for pension benefits:				
Beginning of year	3,920,706,602	9,699,234	0	3,930,405,836
End of year	\$ 4,581,582,681	\$ 11,189,205	\$ 0	\$ 4,592,771,886

See accompanying *Notes to the Financial Statements*.



Missouri State Employees' Retirement System  
*Balance Sheet*  
*Internal Service Fund*  
 As of June 30, 1998

*Assets*

Premiums receivable	\$ 1,444,885
Investments at fair value	575,058
Total assets	<u>2,019,943</u>

*Liabilities and retained earnings*

*Liabilities*

Premiums payable	1,626,525
Employee vacation liability	19,143
Checks outstanding net of deposits	1,753
Other	126,277
Total liabilities	<u>1,773,698</u>

*Retained earnings*

Total liabilities and retained earnings	<u>\$ 2,019,943</u>
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See accompanying *Notes to the Financial Statements*.



Missouri State Employees' Retirement System  
*Statement of Revenues, Expenses, and Changes in Retained Earnings*  
*Internal Service Fund*  
Year Ended June 30, 1998

*Operating revenues*

Premium receipts	\$ 16,720,199
Miscellaneous income	423,419
Total operating revenues	<u>17,143,618</u>

*Operating expenses*

Premium disbursements	16,653,714
Premium refunds	66,485
Administrative expenses	470,791
Total operating expenses	<u>17,190,990</u>
Operating revenues under operating expenses	<u>(47,372)</u>

*Non-operating revenues*

Investment income	<u>58,889</u>
Net revenues over expenses	<u>11,517</u>
Retained earnings July 1, 1997	<u>234,728</u>
Retained earnings June 30, 1998	<u>\$ 246,245</u>

See accompanying *Notes to the Financial Statements*.



## Missouri State Employees' Retirement System

*Statement of Cash Flows**Internal Service Fund*

Year Ended June 30, 1998

*Cash flows from operating activities*

Cash received from employer and members	\$ 16,972,731
Other miscellaneous income	41
Premium payments to outside carriers	(16,480,579)
Refunds of premiums to members	(66,484)
Cash payments to employees for services	(218,258)
Cash payments to other suppliers of goods and services	(159,386)
Net cash provided by operating activities	<u>48,065</u>

*Cash flows from non-capital financing activities*

Implicit funding of checks outstanding net of deposits	1,753
Implicit repayment of prior years' checks outstanding net of deposits	(1,178)
Net cash provided by non-capital financing activities	<u>575</u>

*Cash flows from investing activities*

Purchase of investment securities	(268,983,645)
Proceeds from sale and maturities of investment securities	268,876,116
Cash received from investment income	58,889
Net cash used in investing activities	<u>(48,640)</u>
Net increase in cash	<u>0</u>
Cash balances July 1, 1997	0
Cash balances June 30, 1998	<u>\$ 0</u>

*Reconciliation of operating revenues over expenses to net cash used in operating activities*

Operating revenues under expenses	\$ (47,372)
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Adjustments to reconcile operating revenues under expenses to net cash used in operating activities:

Change in assets and liabilities:	
Increase in operational accounts receivable	(132,525)
Increase in operational accounts payable	227,962
Total adjustments	<u>95,437</u>
Net cash provided by operating activities	<u>\$ 48,065</u>

See accompanying *Notes to the Financial Statements*.

(1) Plan Descriptions

Missouri State Employees' Plan

The Missouri State Employees' Plan (MSEP) is a single-employer, public employee retirement plan administered in accordance with sections 104.010 and 104.312 to 104.800 of the Revised Statutes of Missouri (RSMo). As established under section 104.320, RSMo, the Missouri State Employees' Retirement System is a body corporate and an instrumentality of the state. In the system is vested the powers and duties specified in Sections 104.010 and 104.312 to 104.800 and such other powers as may be necessary or proper to enable it, its officers, employees, and agents to carry out fully and effectively all the purposes of sections 104.010 and 104.312 to 104.800.

Responsibility for the operation and administration of the system is vested in the Missouri State Employees' Retirement System (MOSERS) Board of Trustees. Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the MSEP is considered a part of the state of Missouri financial reporting entity and is included in the state's financial reports as a pension trust fund.

Substantially, all full-time state employees who are not covered under another state-sponsored retirement plan are eligible for membership in the MSEP. On June 30, 1998, membership consisted of the following:

Retirees and beneficiaries currently receiving benefits		16,251
Terminated employees entitled to but not yet receiving benefits		10,485
Active:		
Vested	32,967	
Non-vested	21,577	54,544
Total membership		<u>81,280</u>

The MSEP provides retirement, death and disability benefits to its members. Benefits for general state employees are fully vested after five years of creditable service (four years for elected officials and six years for legislators). Employees may retire at or after age 55 and receive a reduced benefit (or full benefits if they are at least age 50 and their combined age and service equal 80). Cost-of-living adjustments (COLAs) are provided annually based on 80% of the change in the consumer price index with a floor of 4% (for members hired prior to August 28, 1997), and ceiling of 5%, until the cumulative amount of COLAs equal 65% of the original benefit, thereafter the 4% floor is eliminated. Qualified terminated-vested members may make a one-time election to receive the present value of their benefit in a lump sum payment. To qualify, a member must have terminated with at least 5 but less than 10 years of service, be less than age 60 (50 for legislators and uniformed water patrol officers), and have a benefit present value of less than \$10,000.

The state of Missouri is required to make all contributions to the MSEP. Prior to September 1, 1972, contributions by members were required. Accumulated employee contributions made prior to that time, plus interest, are refundable to the member or designated beneficiaries.

Administrative Law Judges' and Legal Advisors' Plan

The Administrative Law Judges' and Legal Advisors' Plan (ALJLAP) is a single-employer, public employee retirement plan administered in accordance with sections 287.812 to 287.856, RSMo. Responsibility for the operation and administration of the system is vested in the MOSERS' Board of Trustees. Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the ALJLAP is considered a part of the state of Missouri financial reporting entity and is included in the state's financial reports as a pension trust fund.

Individuals appointed or employed as administrative law judges or legal advisors in the Division of Workers' Compensation, members of the Labor and Industrial Relations Commission and their attorney or legal counsel, and members of the State Board of Mediation are eligible for membership in the ALJLAP. On June 30, 1998, membership consisted of the following:



Retirees and beneficiaries currently receiving benefits		23
Terminated employees entitled to but not yet receiving benefits		14
Active:		
Vested	42	
Non-vested	0	42
		<hr/>
Total membership		79
		<hr/>

The ALJLAP provides retirement, death, and disability benefits to its members. Employees who retire on or after age 65 with 12 or more years of creditable service or on or after age 55 with 20 or more years of creditable service are eligible for a monthly retirement benefit equal to one-half of the average highest 12 consecutive months of salary received during the period of service. Employees with less than 12 years of service are eligible for a reduced benefit upon retirement. COLAs are provided annually based on 80% of the change in the consumer price index with a floor of 4% (for members hired prior to August 28, 1997), and ceiling of 5%, until the cumulative amount of COLAs equal 65% of the original benefit, thereafter the 4% floor is eliminated. Qualified terminated-vested members may make a one-time election to receive the present value of their benefit in a lump sum payment. To qualify, a member must have terminated with at least five but less than ten years of service, be less than age 60, and have a benefit present value of less than \$10,000. The state of Missouri is required to make all contributions to the ALJLAP.

#### **Judicial Plan**

The Judicial Plan is a single-employer, public employee retirement plan administered in accordance with sections 476.445 to 476.690, RSMo. Responsibility for the operation and administration of the Judicial Plan is vested in the MOSERS' Board of Trustees. Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the Judicial Plan is considered a part of the state of Missouri financial reporting entity and is included in the state's financial reports as a pension trust fund.

Judges are eligible to retire at age 62 with 12 years of creditable service or age 60 with 15 years of creditable service with benefits equal to one-half of the average monthly compensation of the highest judicial position held during the period of service. COLAs are provided annually based on 80% of the change in the consumer price index with a floor of 4% (for members hired

prior to August 28, 1997), and ceiling of 5%, until the cumulative amount of COLAs equal 65% of the original benefit, thereafter the 4% floor is eliminated. Qualified terminated-vested members may make a one-time election to receive the present value of their benefit in a lump sum payment. To qualify, a member must have terminated with at least five but less than ten years of service, be less than age 60, and have a benefit present value of less than \$10,000. On June 30, 1998, membership consisted of the following:

Retirees and beneficiaries currently receiving benefits		342
Terminated employees entitled to but not yet receiving benefits		62
Active:		
Vested	365	
Non-vested	0	365
		<hr/>
Total membership		769
		<hr/>

The Judicial Plan provides retirement, death, and disability benefits to those serving as judges in the state of Missouri. Retirement benefits for members of the judiciary are administered and paid by MOSERS. Amounts paid are reimbursed monthly from appropriations of state funds and are not obligations of MOSERS. Beginning on July 1, 1998, the Judicial Plan will be funded on an actuarial basis and the state of Missouri will be required to make all contributions to the plan.

#### **Missouri State Insurance Plan**

The Missouri State Insurance Plan is accounted for as an internal service fund of the state of Missouri and is administered by MOSERS. It provides basic life insurance for eligible members of the MSEP (except employees of the Department of Conservation, the Missouri Department of Transportation, the Missouri State Highway Patrol, and the state colleges and universities), members of the Judicial Retirement Plan, members of the ALJLAP, and certain members of the Public School Retirement System; optional life insurance for active employees and retirees who are eligible for basic coverage; and a long-term disability plan for certain eligible members. Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the Missouri State Insurance Plan is considered a part of the state of Missouri financial reporting entity and is included in the state's financial reports as an internal service fund.

## (2) Summary of Significant Accounting Policies and Plan Asset Matters

### **Basis of Accounting**

The financial statements of the MSEP, ALJLAP, Judicial Plan, and Missouri State Insurance Plan were prepared using the accrual basis of accounting. Contributions are recognized as revenues in the period in which employee services are performed and expenses are recorded when the corresponding liabilities are incurred, regardless of when payment is made. The direct method of reporting cash flows is used. For its proprietary activities, MOSERS applies all Financial Accounting Standards Board (FASB) statements and interpretations that do not conflict with or contradict Governmental Accounting Standards Board (GASB) pronouncements.

### **Cash**

Cash balances represent both operating cash accounts held by the banks and investment cash on deposit with the investment custodian. To maximize investment income, the float caused by outstanding checks is invested, thus causing a possible negative book balance. The negative book balance has been reflected in the liabilities section of the balance sheet of the Internal Service Fund. The negative book balance has been included as cash and short-term investments on the Statements of Plan Net Assets of the pension trust funds. The following is a schedule of the aggregate book and bank balances of all cash accounts. All deposits are fully insured by the Federal Depository Insurance Corporation (FDIC). In addition to the FDIC insurance coverage on the accounts of MOSERS, the bank pledged the following securities to MOSERS at June 30, 1998, as collateral for overnight repurchase agreements:

\$750,000 Federal Home Loan Bank 6.1% Maturity Date 04/23/1999

\$700,000 Federal Home Loan Bank Discount Note Maturity Date 08/07/1998

\$800,000 Federal Home Loan Bank Discount Note Maturity Date 07/06/1998

Cash Balances			
<u>Pension Trust Funds</u>		<u>Internal Service Fund</u>	
Book	Bank	Book	Bank
\$(3,803,015)	\$361,836	\$(1,753)	\$925

### **Method Used to Value Investments**

Investments of the pension trust funds and the internal service fund are reported at fair value.

The following schedule provides a summary of the fair values of the investments as reported on the statements of net assets of the pension trust funds and balance sheet of the internal service fund. Fair values for the equity real estate investments are based on appraisals performed. Fair values of the venture capital investments are based on valuations of the underlying companies of the limited partnerships. Fair value of the EAFE index fund is determined based on the underlying assets in the fund. The remaining assets are primarily valued by the investment custodian using the last trade price information supplied by various pricing data vendors. At June 30, 1998, the system did not have investments in any one organization, other than those issued by the U.S. government, which represented greater than five percent of plan net assets.

### **Derivatives**

In accordance with its investment policy, MOSERS, through its external investment managers, holds investments in futures contracts and enters into forward foreign currency exchange contracts. Futures contracts of approximately \$59,000,000 in short positions and \$67,000,000 in long positions were held for investment purposes at June 30, 1998. Forward foreign currency exchange contracts are used primarily to hedge against changes in exchange rates related to foreign equities, primarily denominated in European and Asian currencies. At June 30, 1998, MOSERS had approximately \$55,934,987 net exposure to loss from forward foreign currency exchange transactions related to the \$804,447,937 international equity portfolio.

MOSERS could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. MOSERS' investment managers seek to control this risk through counterparty credit evaluations and approvals, counterparty credit limits, and exposure monitoring procedures. MOSERS anticipates that the counterparties will be able to satisfy their obligations under the contracts.



## Investments

Year Ended June 30, 1998

	Pension Trust Funds' Investments at Fair Value	Internal Service Fund Investments at Fair Value	Total (Memorandum Only) Investments at Fair Value
<b>Category 1 Classification</b>			
Common stocks			
Not on securities loan	\$ 2,288,430,151	\$ 0	\$ 2,288,430,151
International investments			
Not on securities loan	428,152,833	0	428,152,833
On securities loan for non-cash collateral	665,055	0	665,055
Preferred stocks	2,928,487	0	2,928,487
Treasury bonds, notes, and bills			
Not on securities loan	205,751,888	0	205,751,888
On securities loan for non-cash collateral	129,052,587	0	129,052,587
Gov't bonds and gov't mortgage backed securities	371,978,217	0	371,978,217
Corporate bonds			
Not on securities loan	355,390,903	0	355,390,903
On securities loan for non-cash collateral	7,397,412	0	7,397,412
Convertible bonds	2,558,435	0	2,558,435
Subtotal	3,792,305,968	0	3,792,305,968
<b>Category 2 Classification</b>			
Repurchase agreements	1,149,689	575,058	1,724,747
Subtotal	1,149,689	575,058	1,724,747
<b>Not Subject to Classification</b>			
Investments held by broker-dealers under securities loans for cash collateral			
Common stocks	10,782,483	0	10,782,483
International investments	45,488,847	0	45,488,847
Treasury bonds, notes, and bills	194,916,939	0	194,916,939
Corporate bonds	50,212,351	0	50,212,351
Short-term investment funds	379,234,898	0	379,234,898
Collateralized mortgage obligations	35,090,072	0	35,090,072
Guaranteed investment contracts	4,040,817	0	4,040,817
Real estate equity holdings	6,824,167	0	6,824,167
Closed-end real estate fund	1,533,142	0	1,533,142
EAFE index fund	350,629,310	0	350,629,310
Foreign currencies	4,449,546	0	4,449,546
Venture capital limited partnerships	404,202	0	404,202
Subtotal	1,083,606,774	0	1,083,606,774
Total	\$ 4,877,062,431	\$ 575,058	\$ 4,877,637,489
Reconciliation to investments on Statements of Net Assets			
Totals above	\$ 4,877,062,431		
Less short-term investments			
Repurchase agreements	(1,149,689)		
Short-term investment funds	(118,259,729)		
Less invested securities lending collateral			
Corporate bonds	(49,052,700)		
Short-term investment funds	(260,975,169)		
Investments on Statement of Plan Net Assets	<u>\$ 4,447,625,144</u>		

### **Categories of Asset Risks**

All investments are governed primarily by an investment doctrine known as the “prudent person rule.” The “prudent person rule,” as set forth by state statute, establishes a standard for all fiduciaries, which includes anyone who has authority with respect to the funds. The Governmental Accounting Standards Board Statement Number 3 requires disclosure of investment securities within the following three categories of credit risk. Category 1 includes investments that are insured or registered or which are held by the system or its agent in the system’s name. Category 2 includes uninsured and unregistered investments, which are held by the counterparty’s trust departments or agent in the system’s name. Category 3 includes uninsured and unregistered investments which are held by the counterparty, its trust department, or agent but not in the system’s name.

A security, for purposes of classification in the above categories, is a transferable financial instrument that evidences ownership or creditorship. “Securities” do not include investments made with another party, real estate, or direct investments in mortgages and other loans. Investments in open-end mutual funds, annuity contracts, and guaranteed investment contracts are also not considered securities for purposes of credit risk classification. Such investments are shown above as “Not Subject to Classification.”

### **Total Memorandum Only Columns**

Total columns captioned “(Memorandum Only)” are to indicate that they are presented only to facilitate financial analysis. Data in these columns do not present financial position, results of operations, or cash flows in conformity with generally accepted accounting principles. Such data are not comparable to a consolidation since interfund eliminations have not been made.

### **Securities Lending Program**

The Board of Trustees’ investment policy permits the pension trust funds to participate in a securities lending program. Bankers Trust Company (the Custodian) administers the program. Certain securities of the pension trust funds are loaned to participating brokers. Brokers who borrow the securities provide collateral in the form of cash, U.S. Treasury or Government Agency securities, or letters of credit issued by approved banks. Collateral must be provided in the amount of 102% of market value for domestic loans and 105% of market value for international loans. There are no restrictions on the amount of loans that can be made. Securities on loan at fiscal year end for cash collateral are presented as “not subject to classification” in the preceding investment

schedule of custodial credit risk; securities on loan for non-cash collateral are classified according to the category pertaining to the collateral. The Custodian provides for full indemnification to the pension trust funds for any losses that might occur in the program due to the failure of a broker to return a security that was borrowed (and if the collateral is inadequate to replace the securities lent) or failure to pay the pension trust funds for income of the securities while on loan. Due to the full indemnification and the fact that securities are monitored daily to ensure the collateral position exceeds the amount the borrowers owe the pension trust funds, credit risk is mitigated. The pension trust funds cannot pledge or sell collateral securities received unless the borrower defaults.

The majority of securities loans are open loans and can be terminated on demand by either MOSERS or the borrower; therefore, there is no direct matching of the maturities of the loans with the investments made with the cash collateral. Cash collateral is invested in MOSERS’ name in a dedicated short-term investment fund. The cash collateral investments had an average weighted maturity of 67 days at June 30, 1998. Investment income from the invested collateral is shared 70/30 for the domestic loans and 75/25 for international loans between the pension trust funds and the Custodian, respectively, representing their compensation for operating the program. Investment income and losses on securities loaned are recognized by the pension trust funds.

### **Office Building, Equipment, and Fixtures**

Office building, equipment, and fixtures are capitalized at cost when acquired. Improvements, which increase the useful life of the property, are capitalized. Maintenance and repairs are charged to expense as incurred. Depreciation is computed using the straight-line method over the estimated useful lives of the related assets according to the following schedule:

5 years for furniture, fixtures, equipment  
40 years for building

### **(3) Contributions and Reserves**

The MSEP and ALJLAP are pension plans covering substantially all state of Missouri employees and administrative law judges and legal advisors in the Division of Workers’ Compensation. The state of Missouri is obligated by state law to make all required contributions to the plans. The required contributions are expressed as a level percentage of covered payroll and are actuarially determined using an individual entry-age actuarial cost method.



The unfunded accrued liabilities are amortized over a closed 37 year period for the MSEP and the ALJLAP. The Judicial Plan is a non-funded or “pay-as-you-go” plan for which the state of Missouri reimburses MOSERS on a monthly basis for the benefits paid each month. Beginning July 1, 1998, the Judicial Plan will be funded on an actuarial funded basis with the unfunded accrued liabilities amortized over a closed 37 year period. Costs of administering the plans are financed from the assets of the pension trust funds.

#### (4) Other Post Employment Benefits (OPEB)

In addition to the retirement benefits provided through MOSERS, the state of Missouri also funds, either partially or in its entirety, OPEB for eligible retirees as follows:

##### Retiree Life Insurance

Retirees, who retired on or after October 1, 1984, are eligible for \$5,000 of state-sponsored basic life insurance coverage if they retire directly from active employment. As of June 30, 1998, 6,988 retirees were eligible and participating in the program. The coverage is financed on a pay-as-you-go basis and is purchased as a group policy through competitive bids at a current cost of \$10.35 per month per eligible participant (\$832,285 for the year ended June 30, 1998). Premiums are paid entirely by the state as provided for by section 104.515 RSMo.

Retirees of the Department of Labor and Industrial Relations (DLIR) who retired prior to January 1, 1996, are eligible for state-sponsored life insurance coverage in the same amount of coverage they were receiving through the DLIR. As of June 30, 1998, 775 retirees were eligible and participating in the program. The coverage is financed on a pay-as-you-go basis and is purchased as a group policy through competitive bids at a current cost of \$2.07 per thousand dollars of coverage, per month, per eligible participant (\$106,262 for the year ended June 30, 1998). Premiums are paid entirely by the DLIR as provided for by section 228.225 RSMo. Retirees of the DLIR who retired after January 1, 1996, are eligible for \$5,000 of state-sponsored life insurance coverage if they retire directly from active employment and are included in the group in the preceding paragraph.

#### (5) Plan Termination

MOSERS and its related plans are administered in accordance with Missouri statutes. The statutes do not provide for termination of the plans under any circumstances.

#### (6) Contingencies

Included in MOSERS’ real estate investments is a property located in St. Louis, Missouri and a property in Kansas City, Missouri, which have been found to have hazardous substance contamination. MOSERS is currently participating in the Hazardous Substance Environmental Remediation Program administered by the Missouri Department of Natural Resources in order to delineate the scope and magnitude of the contamination and determine what appropriate remedial action is needed. Based on the available information, the system’s management feels it is not reasonably possible to predict the amount of additional expense MOSERS may incur, or to predict the outcome of any possible cost recovery actions it may take against other parties. Accordingly, no provision has been made in the accompanying financial statements for this matter.

MOSERS is a defendant in a number of other lawsuits which, in management’s opinion, will not have a material effect on the financial statements.

MOSERS’ key business processes place significant reliance upon internal and vendor information systems. Year 2000 implications could have a significant, adverse impact on the operations of MOSERS if not resolved timely. MOSERS has organized a program to address the implications of the Year 2000. Management believes this program will be adequate to resolve significant Year 2000 risks associated with its critical systems during 1999.

MOSERS is in the process of updating or replacing software, systems, and other equipment in order to have all mission critical systems “2000 compliant” by June 30, 1999. All internal information systems have been reviewed for Year 2000 compliance issues and are in the process of being updated by internal staff. In addition, all critical vendor applications systems are being monitored and they are expected to be delivered in time to meet MOSERS’ deadlines.

*Required Supplementary Information*  
*Schedules of Funding Progress*

*Missouri State Employees' Plan*

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
6/30/89	\$ 1,417,715,534	\$ 1,782,125,565	\$ 364,410,031	79.6%	\$ 895,170,355	40.7%
6/30/90	1,587,114,827	1,861,365,216	274,250,389	85.3	994,228,494	27.6
6/30/91	1,793,370,043	2,052,600,760	259,230,717	87.4	1,027,719,059	25.2
6/30/92	1,991,215,165	2,291,583,890	300,368,725	86.9	1,030,240,894	29.2
6/30/93	2,236,558,739	2,447,222,060	210,663,321	91.4	1,063,246,615	19.8
6/30/94	2,425,134,504	2,919,456,425	494,321,921	83.1	1,124,862,008	43.9
6/30/95	2,649,077,134	3,150,796,580	501,719,446	84.1	1,198,938,042	41.8
6/30/96	2,927,896,643	3,440,126,483	512,229,840	85.1	1,267,605,000	40.4
6/30/97	3,580,974,502	4,484,047,801	903,073,299	79.9	1,359,656,666	66.4
6/30/98	4,210,635,094	4,918,887,183	708,252,089	85.6	1,459,712,203	48.5

*Administrative Law Judges' and Legal Advisors' Plan*

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
6/30/89	\$ 3,348,429	\$ 6,450,259	\$ 3,101,830	51.9%	\$ 1,869,790	165.9%
6/30/90	4,093,598	6,333,743	2,240,145	64.6	1,912,986	117.1
6/30/91	4,707,938	7,202,859	2,494,921	65.4	1,940,201	128.6
6/30/92	5,247,546	7,483,415	2,235,869	70.1	1,725,380	129.6
6/30/93	5,864,317	8,164,468	2,300,151	71.8	1,931,355	119.1
6/30/94	6,229,224	8,766,732	2,537,508	71.1	2,094,062	121.2
6/30/95	6,655,207	9,729,955	3,074,748	68.4	2,166,275	141.9
6/30/96	7,258,814	10,276,363	3,017,549	70.6	2,706,314	111.5
6/30/97	8,864,395	11,427,181	2,562,786	77.6	2,865,733	89.4
6/30/98	10,285,233	12,886,908	2,601,675	79.8	2,806,436	92.7

*Judicial Plan*

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
6/30/89	\$ 0	\$ 97,404,436	\$ 97,404,436	0.0%	\$ 22,665,061	429.8%
6/30/90	0	101,900,740	101,900,740	0.0	24,463,766	416.5
6/30/91	0	119,052,585	119,052,585	0.0	25,742,372	462.5
6/30/92	0	127,140,534	127,140,534	0.0	26,402,164	481.6
6/30/93	0	132,441,964	132,441,964	0.0	26,641,236	497.1
6/30/94	0	141,595,625	141,595,625	0.0	27,006,602	524.3
6/30/95	0	153,646,982	153,646,982	0.0	27,984,008	549.1
6/30/96	0	161,734,110	161,734,110	0.0	29,908,056	540.8
6/30/97	0	197,472,573	197,472,573	0.0	31,663,101	623.7
6/30/98	0	207,579,797	207,579,797	0.0	32,446,141	639.8

See *Notes to the Schedules of Required Supplementary Information*.  
See accompanying *Independent Auditors' Report*.



*Required Supplementary Information*  
*Schedules of Employer Contributions*

*Missouri State Employees' Retirement System*

Year Ended June 30	Annual Required Contribution		Percentage Contributed
	Percent	Dollar Amount	
1991	11.57%	\$ 120,205,229	86%
1992	9.65	100,672,145	100
1993	9.68	102,988,219	100
1994	9.49	106,681,308	100
1995	9.04	108,902,372	100
1996	10.69	137,007,112	100
1997	10.66	146,383,371	100
1998	10.40	152,090,687	100

*Administrative Law Judges' and Legal Advisors' Plan*

Year Ended June 30	Annual Required Contribution		Percentage Contributed
	Percent	Dollar Amount	
1991	26.61%	\$ 527,648	100%
1992	25.51	500,250	100
1993	27.77	548,707	100
1994	24.18	502,019	100
1995	22.50	498,233	100
1996	21.16	548,276	100
1997	22.60	652,709	100
1998	19.66	564,295	100

*Judicial Plan*

Year Ended June 30	Annual Required Contribution		Percentage Contributed
	Percent	Dollar Amount	
1991	35.55%	\$ 9,151,413	56%
1992	37.78	9,974,738	74
1993	40.93	10,904,258	71
1994	40.12	10,835,049	76
1995	40.85	11,431,467	80
1996	43.14	12,902,335	77
1997	46.50	14,723,342	71
1998	45.91	14,896,023	77

See *Notes to the Schedules of Required Supplementary Information*.  
 See accompanying *Independent Auditors' Report*.

*Actuarial Methods and Assumptions for Valuations Performed June 30, 1998*

The entry-age normal actuarial cost method of valuation is used in determining liabilities and normal cost. Differences in the past between assumed experience and actuarial experience ("actuarial gains and losses") become part of actuarial accrued liabilities. Unfunded actuarial accrued liabilities are amortized to produce payments (principal and interest) which are expressed as a percent of payroll. The amortization period used for the June 30, 1998, valuations was a closed 37 year period for all plans. The actuarial value of assets is based on a method that fully recognizes expected investment return and averages unanticipated market return over a three-year period. The investment return rate used is 8.5% per year, compounded annually (net after investment expenses). The inflation rate assumption used is 4.5% per year. Projected salary increase assumptions are based on 4.5% per year for wage inflation plus an additional 0.0% to 2.7% per year for the MSEP and 0.0% to 1.6% per year for the ALJLAP and Judicial Plan, depending on age, attributable to seniority and/or merit increases. The assumption used for post-retirement benefit increases is 4.25% per year when a minimum cost-of-living adjustment (COLA) of 4% is in effect; 3.6% per year when no minimum COLA is in effect.

*Factors that Significantly Affect Identification of Trends*

**1988** - Enacted legislation set the retirement contribution rate for the MSEP at 9.9% for fiscal years 1990 through 1993 unless total revenues (excluding unrealized appreciation of investments) are less than 375% of total expenses in any one year. The Board of Trustees voted to adopt the 9.9% beginning with fiscal year 1989. During 1988, the MSEP received approximately 2,700 members transferring from the Public School Retirement System and approximately 540 members transferring from the Lincoln University Employee Retirement System.

**1989** - The MSEP total revenues were less than 375% of total expenses for the fiscal year ended June 30, 1989. The Board of Trustees voted to keep the retirement contribution rate set at 9.9% through fiscal year 1993. During 1989, approximately 120 members transferred from the Public School Retirement System to the MSEP.

**1990** - The Board of Trustees approved a change in the actuarial rate of return assumption from 8% to 8.5% beginning with the valuations performed as of June 30, 1990.

**1991** - The actuarial valuations as of June 30, 1991, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 1993.

	<u>Amount</u>	<u>% of Payroll</u>
<b>MSEP</b>		
Change in benefits	\$719,403	.07%
Other experience and non-recurring items	(411,088)	(.04)
<b>ALJLAP</b>		
Other experience and non-recurring items	43,849	2.26

**1992** - The actuarial valuations as of June 30, 1992, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 1994.

	<u>Amount</u>	<u>% of Payroll</u>
<b>MSEP</b>		
Change in benefits and assumptions	\$(4,017,939)	(.39)%
Other experience and non-recurring items	2,060,482	.20
<b>ALJLAP</b>		
Change in assumptions	(23,293)	(1.35)
Other experience and non-recurring items	(38,649)	(2.24)

	<u>Amount</u>	<u>% of Payroll</u>
<b>MSEP</b>		
Change in assumptions	\$(16,205,924)	(1.63)%
Other experience and non-recurring items	(2,883,263)	(.29)
<b>ALJLAP</b>		
Change in assumptions	(42,277)	(2.21)
Other experience and non-recurring items	21,234	1.11



1994 - The actuarial valuations as of June 30, 1994, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 1996.

	<u>Amount</u>	<u>% of Payroll</u>
<b>MSEP</b>		
Change in benefits and assumptions	\$31,496,136	2.80%
Other experience and non-recurring items	(12,935,913)	(1.15)
<b>ALJLAP</b>		
Change in benefits and assumptions	\$21,359	1.02
Other experience and non-recurring items	(49,420)	(2.36)

1996 - The actuarial valuations as of June 30, 1996, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 1998.

	<u>Amount</u>	<u>% of Payroll</u>
<b>MSEP</b>		
Change in benefits and assumptions	\$(1,774,647)	(0.14)%
Other experience and non-recurring items	(1,521,126)	(0.12)
<b>ALJLAP</b>		
Change in benefits and assumptions	\$(43,572)	(1.61)
Other experience and non-recurring items	(35,994)	(1.33)

1997 - During the year ended June 30, 1997, the MSEP experienced a net change of \$1,043,921,000 in the actuarial accrued liability. Of the change, \$660,195,000 was attributable to plan amendments and \$53,365,000 was attributable to a change in actuarial assumptions.

During the year ended June 30, 1997, the ALJLAP experienced a net change of \$1,150,818 in the actuarial accrued liability. Of the change, \$1,055,550 was attributable to plan amendments.

During the year ended June 30, 1997, the Judicial Plan experienced a net change of \$35,738,463 in the actuarial accrued liability. Of the change, \$23,140,721 was attributable to plan amendments.

The actuarial valuations as of June 30, 1997, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 1999.

	<u>Amount</u>	<u>% of Payroll</u>
<b>MSEP</b>		
Change in benefits and assumptions	\$44,188,842	3.25%
Other experience and non-recurring items	(14,548,326)	(1.07)
<b>ALJLAP</b>		
Change in benefits and assumptions	\$45,565	1.59
Other experience and non-recurring items	(73,076)	(2.55)

<b>Judicial Plan</b>		
First year for funding of benefits previously paid on a pay-as-you-go basis	\$16,404,653	51.81

1998 - The actuarial valuations as of June 30, 1998, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2000.

	<u>Amount</u>	<u>% of Payroll</u>
<b>MSEP</b>		
Other experience and non-recurring items	\$(9,780,072)	(0.67)%
<b>ALJLAP</b>		
Other experience and non-recurring items	39,290	1.40
<b>Judicial Plan</b>		
Other experience and non-recurring items	684,614	2.11

Missouri State Employees' Retirement System  
*Schedule of Administrative Expenses*  
Year Ended June 30, 1998

	Pension Trust Funds			Internal Service Fund
	Missouri State Employees' Plan	Administrative Law Judges' and Legal Advisors' Plan	Total (Memorandum Only)	Missouri State Insurance Plan
<i><b>Personal Services</b></i>				
Salaries	\$ 1,779,840	\$ 4,342	\$ 1,784,182	\$ 239,372
Employee fringe benefits	422,936	1,032	423,968	55,331
Total personal services	2,202,776	5,374	2,208,150	294,703
<i><b>Professional Services</b></i>				
Actuarial services	121,673	297	121,970	0
Attorney services	101,422	247	101,669	7,152
Auditing services	32,279	79	32,358	3,842
Banking services	15,379	38	15,417	601
Consulting services	30,676	75	30,751	12,040
Total professional services	301,429	736	302,165	23,635
<i><b>Communications</b></i>				
Postage and mailing	211,664	516	212,180	29,136
Telephone	60,920	149	61,069	5,595
Printing	221,673	541	222,214	8,015
Total communications	494,257	1,206	495,463	42,746
<i><b>Building and Grounds</b></i>				
Depreciation	29,794	73	29,867	0
Utilities	38,007	93	38,100	5,071
Maintenance	16,148	39	16,187	1,996
Total building and grounds	83,949	205	84,154	7,067
<i><b>Equipment</b></i>				
Depreciation	280,139	683	280,822	0
Maintenance	66,788	163	66,951	9,345
Rental	39,722	97	39,819	5,155
Reimbursed shared expenses	(34,030)	(83)	(34,113)	34,346
(Gain) Loss on sale of equipment	1,488	4	1,492	0
Total equipment	354,107	864	354,971	48,846
<i><b>Travel and Meetings</b></i>				
Board travel and meetings	20,659	50	20,709	2,063
Staff travel and meetings	134,729	329	135,058	16,840
Vehicle maintenance and operation	1,340	3	1,343	164
Total travel and meetings	156,728	382	157,110	19,067
<i><b>General</b></i>				
Educational materials	26,244	64	26,308	2,393
Office supplies	524,815	1,280	526,095	15,964
Subscriptions and dues	260,844	636	261,480	2,866
Insurance	77,056	188	77,244	11,172
Advertising	1,141	3	1,144	129
Temporary help	11,766	29	11,795	1,359
Physical examinations	190	0	190	0
Miscellaneous	5,642	14	5,656	844
Total general	907,698	2,214	909,912	34,727
Total administrative expenses	\$ 4,500,944	\$ 10,981	\$ 4,511,925	\$ 470,791

See accompanying *Independent Auditors' Report*.



Missouri State Employees' Retirement System  
*Schedule of Investment Expenses*  
 Year Ended June 30, 1998

	Missouri State Employees' Plan	Administrative Law Judges' and Legal Advisors' Plan	Total (Memorandum Only)
<i>Investment activity</i>			
<i>Investment management fees</i>			
<u>Fixed income managers</u>			
BlackRock Financial Management L.P.	\$ 324,209	\$ 791	\$ 325,000
Hoisington Investment Management Company	149,635	365	150,000
<u>Equity managers</u>			
<i>Domestic equities</i>			
Capital Guardian Trust	454,017	1,108	455,125
Conning Asset Management Company	1,482	4	1,486
Kennedy Capital Management	582,938	1,422	584,360
American Re Asset Management	314,786	768	315,554
Wilshire Associates, Inc.	341,018	832	341,850
Woodford Gayed Management, Inc.	371,095	905	372,000
Zak Capital, Inc.	489,845	1,195	491,040
Brinson Partners, Inc.	4,550	11	4,561
<i>International equities</i>			
Bankers Trust Company	240,527	587	241,114
Silchester International Investors	1,401,743	3,420	1,405,163
Morgan Grenfell Investment Services Limited	653,127	1,593	654,720
<u>Cash manager</u>			
Bankers Trust Company	(4,611)	(11)	(4,622)
Total investment management fees	5,324,361	12,990	5,337,351
Investment consultant fees - Summit Strategies, Inc.	203,723	497	204,220
Investment custodial fees - Bankers Trust Company	499,532	1,219	500,751
Performance measurement fees - Bankers Trust Company	67,186	164	67,350
Total investment activity expenses	6,094,802	14,870	6,109,672
<i>Securities lending activity</i>			
Securities lending borrower rebates	19,608,918	47,842	19,656,760
Securities lending management fees - Bankers Trust Company	682,992	1,666	684,658
Total securities lending activity expenses	20,291,910	49,508	20,341,418
Total investment expenses	\$ 26,386,712	\$ 64,378	\$ 26,451,090

See accompanying *Independent Auditors' Report*.

Missouri State Employees' Retirement System  
*Schedule of Professional/Consultant Fees*  
Year Ended June 30, 1998

Professional /Consultant	Nature of Service	Pension Trust Funds			Internal
		Missouri State	Administrative Law Judges' and and Legal Advisors' Plan	Total (Memorandum Only)	Service Fund
		Employees' Plan			Missouri State Insurance Plan
Gabriel, Roeder, Smith & Co.	Actuary	\$ 121,673	\$ 297	\$ 121,970	\$ 0
Thompson Coburn	Legal Counsel	101,422	247	101,669	7,152
KPMG Peat Marwick LLP	Auditor	32,279	79	32,358	3,842
Central Bank	Banking Service	15,379	38	15,417	601
Jack Pierce	Governmental Pension Consultant	14,337	35	14,372	5,628
Charlesworth & Associates, L.C.	Risk Consultant	13,585	33	13,618	5,332
Timothy Perkins	Web Site Design	1,792	5	1,797	703
GEI Consultants, Inc.	Environmental Consultant	38	0	38	15
Mass Strategic Communications	Telecommunication Consultant	924	2	926	362
Total professional/consultant fees		\$ 301,429	\$ 736	\$ 302,165	\$ 23,635

See accompanying *Independent Auditors' Report*.

Information on investment management and consulting fees can be found in the *Schedule of Investment Expenses* on page 37.



## Missouri State Employees' Retirement System

## Investment Summary

## Pension Trust Funds

Year Ended June 30, 1998

Type of Investment	June 30, 1997		Purchases and Capital Additions at Cost	Sales and Redemptions at Cost	June 30, 1998		%Total Fair Value
	Cost Value	Fair Value			Cost Value	Fair Value	
<i>Fixed income</i>							
Treasury bonds, notes, and bills	\$ 560,179,604	\$ 565,171,381	\$ 589,766,368	\$ 664,150,015	\$ 485,795,957	\$ 529,721,414	11.91%
Gov't bonds and gov't mortgage backed securities	285,537,631	291,920,461	3,455,111,800	3,377,250,173	363,399,258	371,978,217	8.36
Corporate bonds	233,667,479	235,831,671	318,851,257	196,880,549	355,638,187	363,947,966	8.18
Convertible bonds	1,400,000	1,563,000	1,401,669	400,000	2,401,669	2,558,435	0.06
Collateralized mortgage obligations	30,309,474	30,797,707	37,596,790	36,179,745	31,726,519	35,090,072	0.79
Guaranteed investment contracts	14,886,866	14,886,867	490,940	11,336,989	4,040,817	4,040,817	0.09
Total fixed income	1,125,981,054	1,140,171,087	4,403,218,824	4,286,197,471	1,243,002,407	1,307,336,921	29.39
<i>Common stocks</i>							
	1,398,853,675	1,920,692,219	1,650,020,171	1,228,562,018	1,820,311,828	2,299,212,634	51.70
<i>Preferred stocks</i>	3,503,690	3,335,344	2,505,520	2,944,837	3,064,373	2,928,487	0.07
<i>International investments</i>							
International equities	353,003,772	410,374,737	250,057,794	187,879,358	415,182,208	463,272,250	10.42
International corporate bonds	13,424,415	13,536,945	7,325,797	10,371,631	10,378,581	11,034,485	0.25
Foreign currency	1,003,342	3,153,542	43,949,347	40,081,283	4,871,406	4,449,546	0.10
EAFE index fund	239,830,406	311,817,330	17,000,000	0	256,830,406	350,629,310	7.88
Total international investments	607,261,935	738,882,554	318,332,938	238,332,272	687,262,601	829,385,591	18.65
<i>Real estate</i>							
Loan and mortgages	3,321,040	3,321,040	0	3,321,040	0	0	0.00
Equity holdings	7,330,533	6,842,383	0	0	7,330,533	6,824,167	0.15
Closed-end real estate fund	5,419,190	4,717,952	0	3,659,000	1,760,190	1,533,142	0.03
Total real estate	16,070,763	14,881,375	0	6,980,040	9,090,723	8,357,309	0.18
<i>Venture capital limited partnerships</i>							
	1,146,042	510,474	0	158,894	987,148	404,202	0.01
<i>Investments (per Statements of Plan Net Assets page 21)</i>							
	3,152,817,159	3,818,473,053	6,374,077,453	5,763,175,532	3,763,719,080	4,447,625,144	100.00%
<i>Short-term investments</i>							
Short-term investment funds	144,006,294	144,006,294	2,897,888,012	2,923,634,577	118,259,729	118,259,729	
Repurchase agreements	1,253,781	1,253,781	154,400,101	154,504,195	1,149,687	1,149,689	
Total short-term investments	145,260,075	145,260,075	3,052,288,113	3,078,138,772	119,409,416	119,409,418	
<i>Invested securities lending collateral</i>							
Corporate bonds	76,018,321	76,054,020	74,214,190	101,231,053	49,001,458	49,052,700	
Government bonds	4,996,112	5,000,850	23,232,747	28,228,859	0	0	
Short-term investment funds	281,637,161	281,636,420	24,040,547,048	24,061,209,040	260,975,169	260,975,169	
Total invested securities lending collateral	362,651,594	362,691,290	24,137,993,985	24,190,668,952	309,976,627	310,027,869	
Total investments	\$3,660,728,828	\$4,326,424,418	\$33,564,359,551	\$33,031,983,256	\$4,193,105,123	\$4,877,062,431	

See accompanying *Independent Auditors' Report*.

Note: Due to space limitations and printing costs, a detailed listing of the investment holdings and transactions could not be provided in this annual report; however, the detailed reports are available for review as an appendix to this report at the MOSERS' office.

Missouri State Employees' Retirement System

*Investment Summary*

*Internal Service Fund*

Year Ended June 30, 1998

Type of Investment	June 30, 1997		Purchases at Cost	Sales and Redemptions at Cost	June 30, 1998		% Total Fair Value
	Cost Value	Fair Value			Cost Value	Fair Value	
Repurchase agreements	\$ 467,529	\$ 467,529	\$ 268,983,645	\$ 268,876,116	\$ 575,058	\$ 575,058	100%

See accompanying *Independent Auditors' Report*.

Note: Due to space limitations and printing costs, a detailed listing of the investment holdings and transactions could not be provided in this annual report; however, the detailed reports are available for review as an appendix to this report at the MOSERS' office.





*Long-range planning makes it possible to live happily ever after.*





**Summit Strategies Group**

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September 21, 1998

The Board of Trustees  
Missouri State Employees' Retirement System  
907 Wildwood Drive  
Jefferson City, Missouri 65109

Dear Board Members:

It is an interesting exercise to write, in September, about the investment results and related activities of MOSERS for the fiscal year ended June 30. While markets never stand still, the two and one-half month period since the end of the fiscal year has been one of the most interesting times for investors in the 1990s. Before I get to that, however, let's summarize the remarkable fiscal year that just ended.

The highlights of the year ended June 30, 1998, included:

- ◆ Growth of the fund at 17.0% which translates to investment gains of \$666 million.
- ◆ Growth of domestic equities by 23.9%. Although a tremendous absolute return, it trailed its benchmark since the system's long-term position in smaller capitalization names could not keep pace with the largest U.S. companies (which continued to dominate world equity returns).
- ◆ An economic environment in which international stocks, in general, had a negative one-year return of -1.6% as the Asian Crisis that began in the fall of 1997 took its toll on overseas investments. MOSERS' actual result from international stocks was positive at 6.2% — the largest margin of value added in any of the asset classes held by the system.
- ◆ A fixed income portfolio which generated returns of 12.3% for the year versus the market of 10.5%.

I referenced events after these results were generated because of the following market movements which occurred between June 30 and the date of this letter:

- ◆ The S&P 500, which is the proxy for large capitalization U.S. stocks, peaked at 1,187 on July 17 before dropping to 957 in late August for a decline of 20% in six weeks. It has since rebounded 7% to 1,020 today, but this is still down -14% from its June 30 level.
- ◆ Small capitalization U.S. stocks, which had been trailing large capitalization stocks since 1993 (even though outstanding in terms of absolute returns), have experienced a particularly rough period lately, down -18% in calendar 1998 alone and off -40% since their high for the year in mid-April.
- ◆ The top performing market block in the world this year has been Developed Europe with a return of 13% in calendar 1998, although it, too, has suffered since its July highs. Offsetting these positive results has been the continued decline in the Asian markets and the significant declines of the world's emerging markets.
- ◆ U.S. Treasury bond yields are at their lowest in history with the 30 year bond yield at 5.12%. While this has been great for the current term returns of the bond market, it makes it impossible, going forward, to earn the double-digit returns enjoyed last year and for the past 15 years.



So, what does this mean? It means that the markets are behaving “normally” after a significant period of abnormal (although wonderful) returns. As of June 30, the three-year return of the S&P 500 was greater than 30% per year. This means that greater than half of the value of all U.S. companies has been created since 1995, and with that has come the perception of minimal risk (stocks just kept going up). Even small capitalization stocks, which were relative underperformers compared to their large counterparts, still generated returns of 18.9% per year! While this has been wonderful for investors, it certainly has not been “normal.”

Long-term (and MOSERS is a very long-term investor) risk must be taken in order to earn meaningful returns in excess of inflation. MOSERS’ assets are expected to earn a return of 4.5% in excess of inflation. Therefore, the system must take risk. Activity in recent months has given us a wake-up call that risk is not dead. Markets move both up and down, and to expect otherwise is unrealistic.

In conclusion, I will leave you with the five questions that I would ask if I were a participant of the system, coupled with my responses.

1. **Can MOSERS avoid the price swings of the market (in other words, can we get out of the way of a market decline like the one we’ve recently seen)?** Unfortunately, but emphatically, NO. You may guess correctly once or twice, but there is no quicker way to lose your money than to try to do this as a long-term strategy.
2. **Are my benefits at risk when the market moves in substantial amounts?** No. The simple answer is that your benefits are never at risk because the state guarantees them. From an investment perspective, we assume the portfolio will grow at 8.5% per year long term. We also recognize that it will not grow at this rate every year. In some ways, the outstanding returns of the past 15 years are expected to serve as a “cushion” for periods of under performance like we’ve seen recently.
3. **If we cannot avoid these market movements, is there a way to cushion their impact?** Absolutely. It is called diversification and it is the foundation of MOSERS’ investment philosophy. By spreading investments around the world and into various asset classes, MOSERS can “smooth” the volatility that must be accepted in order to meet long-term goals. For instance, in the current environment the declines in the equity markets are being offset by gains in MOSERS’ bond portfolio.
4. **How has MOSERS’ investment portfolio changed in the last several years?** In one word, substantially. The number of external managers is down significantly, and the capabilities and duties of staff have expanded dramatically. My impression is that the board is more focused, efficient, and confident in the investment program today than at any other time during my association with MOSERS.
5. **What should I expect to see in terms of changes in MOSERS’ portfolio in the years to come?** While ultimately the board must answer this question, I believe that a program has been put in place which emphasizes broad market exposure across a variety of markets, a reduction in overall costs while building a very strong internal investment staff and a desire to explore and consider evolving investment ideas. When markets are rising as they have during the past several years, the attention to details, like cost and efficiency, tends to get overshadowed. Yet, when markets act like they have recently, the ever present attention to details at MOSERS take on even greater significance.

Thank you for allowing us to continue to serve you.

Sincerely,



Stephen P. Holmes, CFA  
President



**MOSERS**

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Retirement System*

*Board of Trustees*

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*[www.mosers.org](http://www.mosers.org)*

*Rick Dahl  
Chief Investment Officer*

September 1, 1998

Dear Members:

It is a privilege to present this year's investment section of the MOSERS' Comprehensive Annual Financial Report. Here are a few of the highlights of the year.

- ◆ As of June 30, 1998, your pension fund was one of the 200 largest defined benefit plans in the United States with total assets of nearly \$4.6 billion. Total earnings for FY98 were approximately \$660 million, with the fund generating a return of 17.0% net of expenses.
- ◆ Total earnings for the last three years were nearly \$1.8 billion, with the fund generating an annualized rate of return of nearly 18.0%. There have been only two other occasions in the fund's history that the asset base has experienced such a dramatic percentage increase in any three-year period.
- ◆ For the year, the fund spent approximately \$7.5 million for management of the assets, which was nearly \$8.75 million less than the median fund in our peer group. (It is worth noting that those who spend more are generally not being rewarded for their expenditures.)
- ◆ Both the S&P 500 portfolio and the money market portfolio, which were being managed by outside service providers, were moved to internal staff. This resulted in significant cost savings to the fund.

While it is always easier to report just the good news, I would be remiss if I failed to point out that we were disappointed that the fund lagged its policy benchmark in FY98. Three factors played key roles in the fund's performance relative to the benchmark this year: (i) poor relative performance of our active U.S. stock manager group, (ii) our bias in favor of small capitalization stocks during a year in which the largest companies performed the best by a wide margin, and (iii) our small (yet greater than zero) allocation to the emerging markets which have been and continue to be under extreme pressure. It would be unrealistic to expect that long-term investment decisions made at MOSERS will always work in our favor over short time periods. I can assure you, however, that we are constantly assessing the investment decisions that have been made to verify that the reasoning used in implementing the strategy still makes sense. These reality checks are a healthy part of any well-run investment program and should not be ignored regardless of the circumstances.

How time has flown. I first reported to you as MOSERS' Chief Investment Officer four years ago. In previous years, I have written about the need to guard against the belief that we have entered a new era where U.S. stocks go straight up and our economy never falls into another recession. I have stressed that investors should attempt to maintain reasonable expectations about what might lie ahead for U.S.



stocks by educating themselves about the history of the markets. I have pointed out the need to diversify into asset classes that do not move in the same direction at the same time as U.S. stocks and to systematically rebalance (more commonly referred to as a disciplined approach of buying low and selling high) to lower overall portfolio volatility.

Historically, these concepts have proven beneficial in managing investment portfolios. Until just recently, many, if not all of these ideas which are deeply rooted in the MOSERS' portfolio, seemed to be producing very little added benefit when compared to a portfolio that was invested in the largest U.S. companies. As is readily evident, as I write this letter and as you read it, the U.S. stock market is returning to a more typical pattern of volatility (the last several years have been very abnormal) and the near-term outlook for stocks has clearly changed. As the stock market delivers negative returns for the first time in several years, we are pleased that over 30% of MOSERS' assets are invested in fixed income securities, which are performing very well. This is a prime example of why diversification is so important.

There are many explanations as to why the U.S. stock market's landscape has changed in the last few months: currency devaluations, political instability, hedge fund speculation, fears of deflation, and the list goes on. All of these problems translate into "uncertainty" on the horizon. The stock market hates uncertainty, because it brings into question the ability of corporate America to continue to expand profits. Without question, corporate profits are the one thing that, over the long term, will have the greatest impact on the stock market's ability to rebound and head to new highs.

During periods like we are experiencing presently, the urge is to sell — just get out. For those of you who are invested in stocks with dollars that you expect to use for other things sometime soon, your urge to sell is probably the right one. The question really is whether or not assets needed in the near term should be invested in stocks. I would argue that unless you have at least a five year time horizon the answer is no. For long-term investors, like MOSERS, the advice is different. If you are feeling compelled to make a move, turn off CNBC, turn on the Disney channel, and spend some time with the children or grandchildren. Decisions to invest in stocks should not be made to make a quick buck but rather because, over long periods of time, stocks have delivered real returns in excess of any other investment. There is no reason to expect this will not continue into the future. However, you should not expect it to continue at the accelerated pace nor at the low level of volatility that has been experienced since late 1990.

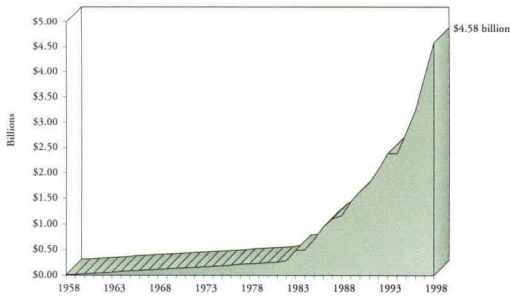
Think about it this way; most of you have owned or currently own a home. One of the reasons you decided to buy rather than lease was because you wanted to build equity (ownership) rather than pay rent. When you purchased that asset, you paid what you believed to be fair price. If you were or have been a homeowner for a long period of time, there is a high likelihood that, at some point during your ownership period, the value of your real estate went down. It may have even dipped below what you paid for it. Why, in that circumstance, was your reaction different than it might be today with a decline in the value of your stock investments? The answer probably goes something like this: I am not concerned about short-term fluctuations in the value of my home, because I bought it to live in for many years to come. Why should the answer be any different for your stock investments?

Stocks will continue to deliver short-term disappointments, just as they have for the last 70 years. At MOSERS, these short-term disruptions are built into our expectations. If your assets are invested in the stock market for the same reason as ours, those expectations should be built into yours as well.

Until next year,

  
Rick Dahl, CFP

### 41 Years of Growth



### Fiduciary Responsibility

The members of the MOSERS' Board of Trustees are charged with the ultimate fiduciary responsibility for investment of system assets. In carrying out their responsibilities, they must adhere to state law with respect to the duties of investment fiduciaries. Accordingly, they are required to "discharge their duties in the interest of plan participants" and "act with the same care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a similar capacity and familiar with those matters would use in the conduct of a similar enterprise with similar aims."

### Guiding Principles

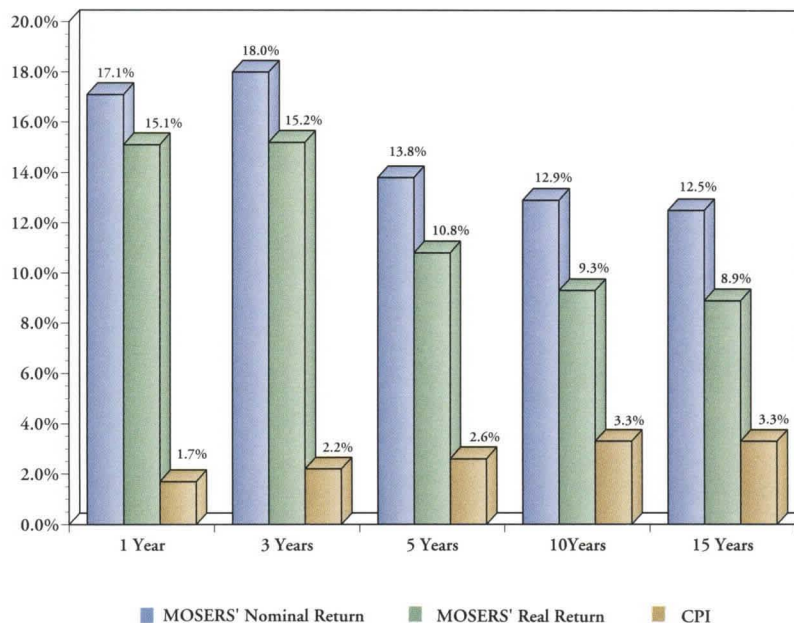
In an attempt to clarify the complexity of the above statement, the board has adopted the following principles which guide all investment related decisions:

- ◆ Preserve the long-term corpus of the fund.
- ◆ Maximize total return within prudent risk parameters.
- ◆ Act in the exclusive interest of the members of the system.

### Investment Objective

The investment objective established by the Board, as a long-term goal, is to achieve a real rate of return of at least 4.0% per year. The real rate of return is defined as the rate by which the total return on system assets exceeds the inflation rate. As can be seen from the graphic below, this objective was achieved in the current fiscal year (FY98) and has been successfully achieved over longer periods of time.<sup>1</sup>

### MOSERS' Return vs. Consumer Price Index (Inflation)

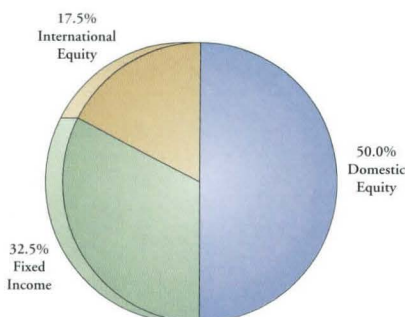


CPI Source: US Department of Labor Bureau of Labor Statistics (not seasonally adjusted) MOSERS'  
 Real Return is the excess return over the CPI utilizing the formula  

$$\text{Real} = (1 + \text{Nominal}) / (1 + \text{CPI}) - 1$$

<sup>1</sup> All investment returns are being reported gross of investment management fees and are in full compliance with AIMR and BAI standards.

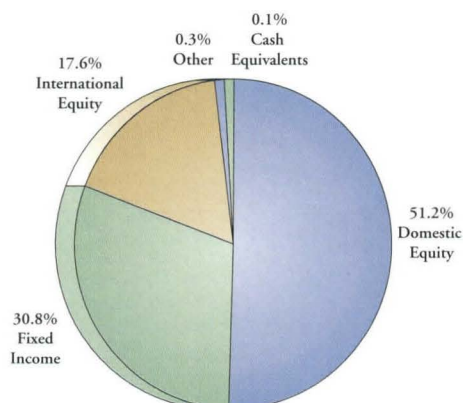


**MOSERS' Policy Asset Mix****Strategic Asset Allocation**

By asset class, MOSERS' assets are divided among domestic equity, international equity, and domestic fixed income investments. It is common practice to diversify portfolios by allocating investments among asset classes in order to improve the risk/return profile of the fund. Studies indicate that over 90% of an investment portfolio's return can be attributed to the asset allocation decision.

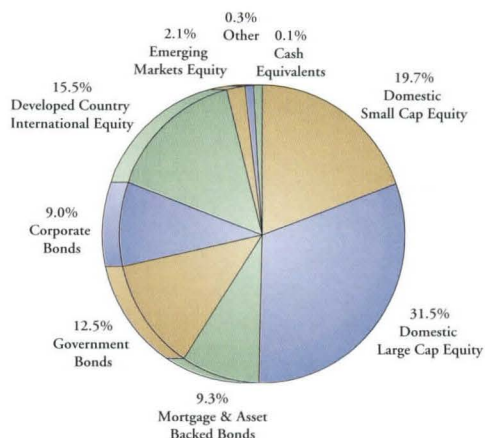
MOSERS' policy asset mix is depicted in the pie chart to the left.

Due to the fact that different asset classes seldom move in lock step with each other it is reasonable to expect that over time the actual allocation will differ from that of the policy mix. The following chart depicts MOSERS' actual asset mix as of June 30, 1998.

**Allocation by Asset Class**

Other - includes guaranteed investment contracts, venture capital, and real estate.

Within each asset class there exist numerous investment styles and philosophies. These within-class allocations are generally subject to higher return volatility than the asset classes, however, when aggregated they allow for an additional level of diversification. The following chart depicts MOSERS' actual within class asset mix as of June 30, 1998.

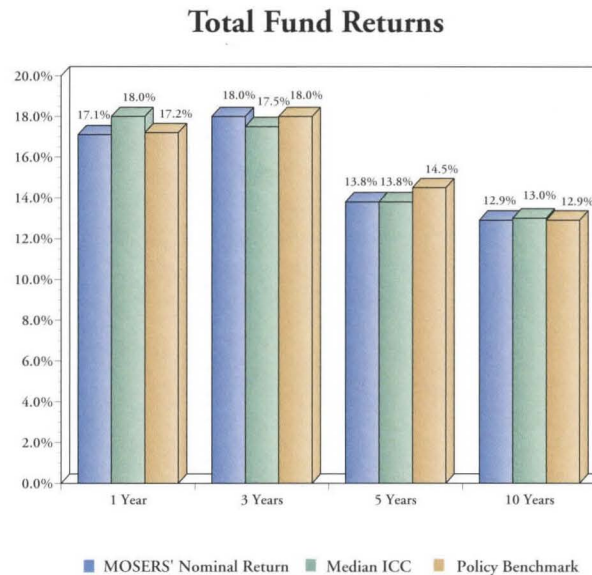
**Allocation by Sub-Asset Class**

Other - includes guaranteed investment contracts, venture capital, and real estate.

## Total Fund Investment Returns

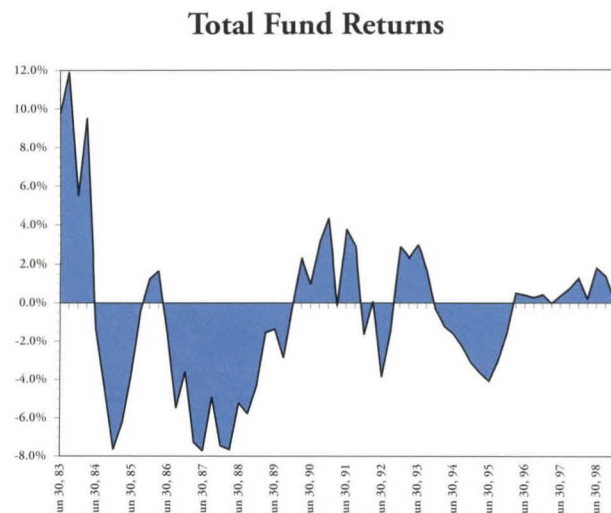
MOSERS' total fund return for the fiscal year was 17.0%. We compare this return with the median return of 18.0% produced by the Independent Consultants Cooperative (ICC) universe of public pension plans having assets in excess of \$1 billion. The ICC is a cooperative consisting of thirteen independent investment consultants across the United States and one major custodial bank that collectively provide performance data in order to create a universe of peer returns. The graph also shows that the fund performed in line with the System's 17.2% policy benchmark return. The policy benchmark return is the return that would have been achieved had MOSERS passively implemented the fund's policy asset mix decision through index funds.

The following graph shows one year results as described above and also includes total fund return comparisons for three, five, and ten year time periods.



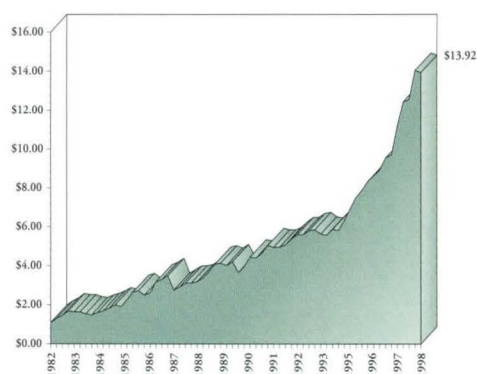
Policy Benchmark = the appropriate mix of Russell 3000, Lehman Aggregate, MSCI EAFE, MSCI Emerging Markets, and Russell NCRIEF.

The following graph illustrates the relationship between MOSERS' total fund performance and the return that would have been achieved had the decision been made to passively implement the fund's strategy. The "0.0%" axis represents performance of the total fund benchmark while the solid area displays MOSERS' actual rolling one-year return variance relative to the benchmark. In the most recent history it is clear that performance volatility relative to the benchmark has been reduced. Management will continue to focus on a portfolio construction process which attempts to add value versus the benchmark while keeping volatility to a minimum.





Growth of a Dollar in Domestic Equities



### Summary of Domestic Equity Investments

U.S. stocks, with a target allocation of 50%, are employed by the fund primarily because their historical return premiums over inflation, if realized in the future, will help preserve and enhance the fund's ability to achieve a long-term real rate of return in excess of the 4.0% objective set by the board. The MOSERS' U.S. stock investment portfolio will emphasize equity securities issued by publicly held corporations domiciled in the United States.

### Investment Portfolio Structure

As of June 30, 1998, 66% of the U.S. stock portfolio was passively managed while 34% was managed actively. Large cap stocks represented 62% while medium/small cap stocks represented 38%. The stocks within the MOSERS' U.S. stock portfolio can be classified by style as follows: 44% value, 28% core, and 28% growth.

### Market Value

As of June 30, 1998, the MOSERS' U.S. stock portfolio had a market value of \$2.347 billion, representing 51.3% of the total fund.

### Domestic Equity Portfolio Statistics

The following table displays the statistical characteristics of the MOSERS' U.S. stock portfolio as of June 30, 1998, with comparisons shown to the portfolio's policy benchmark, the Russell 3000, and the prior fiscal year.

Characteristic	June 30, 1998 MOSERS'— U.S. Stocks	June 30, 1998 Russell 3000	June 30, 1997 MOSERS'— U.S. Stocks
Number of Securities	1030	3000	1031
Avg. Market Capitalization	\$38.7 billion	\$55.3 billion	\$26.8 billion
Portfolio Yield	1.5%	1.4%	2.0%
Portfolio P/E	19.7x	22.7x	18.1x
Portfolio Beta vs. S&P 500	0.94	0.99	0.92
Price/Book Ratio	4.8x	4.9x	3.7x
Five Yr. Earnings Growth	16.7%	17.4%	16.9%

Ten Largest Holdings June 30, 1998 <sup>2</sup>	Market Value	% of Total U.S. Stocks	Ten Largest Holdings June 30, 1997	Market Value	% of Total U.S. Stocks
General Electric	\$ 41,756,154	1.8%	General Electric	\$ 33,150,000	1.7%
Microsoft	37,287,502	1.6	Coca Cola	26,267,676	1.3
Coca Cola	29,832,841	1.3	Intel Corp.	25,398,708	1.3
Merck & Co.	28,345,057	1.2	Microsoft	23,543,663	1.2
Pfizer Inc.	24,842,816	1.1	Merck & Co.	19,282,186	1.0
IBM	24,622,796	1.0	Walmart	16,836,388	0.9
Walmart	22,821,300	1.0	Johnson & Johnson	16,055,125	0.8
Intel Corp.	22,688,921	1.0	Chevron Corp.	15,740,957	0.8
Johnson & Johnson	18,078,200	0.8	Hewlett Packard Co.	15,236,158	0.8
First Union Corp.	17,366,888	0.7	Procter & Gamble Co.	14,873,625	0.8

<sup>2</sup> A complete list of holdings is available upon request.

### *Domestic Equity Portfolio Investment Advisors*

As of June 30, 1998, MOSERS had contracts with six external investment advisors for the management of U.S. stock portfolios. Five of these firms are managing active portfolios that are expected to add incremental return over an established benchmark through stock selection, sector selection or some combination of the two. The other manager exercises a passive discipline. The passive portfolios are expected to provide broad market diversification and are designed to track the performance of the market at a low cost.

On July 1, 1997, at the direction of the board, management of the S&P 500 portfolio was internalized. Utilizing staff expertise for 20% of the domestic equity portfolio enables passive participation in a very significant segment of the equity market at a very low cost.

The following firms were under contract with MOSERS during all or some portion FY98 for management of U.S. stocks. Also displayed in this table are the managers' investment styles, FY98 ending portfolio market values and the managerial fees paid in FY98.

Investment Advisor	Investment Style	Portfolio Market Value as of June 30, 1998	FY98 Mgmt. Fee
Conning Asset Mgmt.	Passive S&P 500	\$ 0	\$ 1,486
Wilshire Asset Mgmt.	Passive Wilshire Large Cap Value Wilshire Large Cap Growth Wilshire Mid Cap Value	311,443,285 328,958,203 416,421,750	98,756 98,757 144,337
American Re Asset Mgmt. (formerly SENECA, Inc.)	Active Large Cap Value	159,463,637	315,554
Woodford Gayed Mgmt., Inc. (formerly Woodford Capital Mgmt.)	Active Large Cap Growth	155,864,929	372,000
Zak Capital, Inc.	Active Mid Cap Growth	171,518,219	491,040
Kennedy Capital Mgmt.	Active Small Cap Value	149,958,172	584,360
Capital Guardian Trust Co.	Active Small Cap Core	163,693,140	455,125
Total		\$2,346,805,899 <sup>3</sup>	\$2,561,415

<sup>3</sup>This total includes the internally managed S&P 500 Portfolio. This portfolio had a market value of \$489,484,564 as of June 30, 1998.

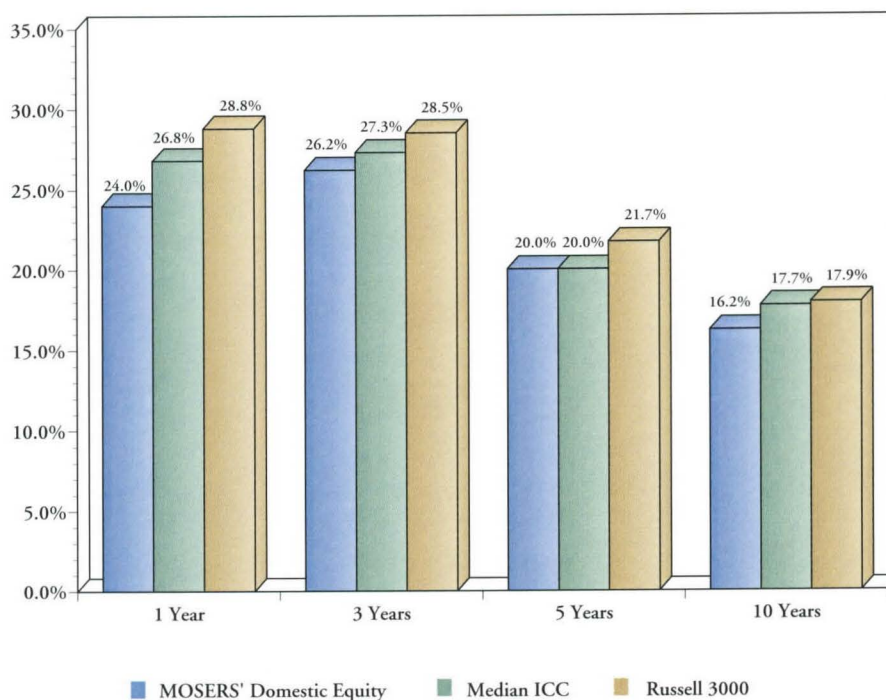


### *Domestic Equity Investment Returns*

MOSERS' domestic equity return for the fiscal year was 24.0%. This was below the return of the policy benchmark, the Russell 3000 Index, which finished at 28.8%. Within the ICC universe of domestic equity returns for public pension plans, the MOSERS' return was also under the median return of 26.8%. The shortfall is attributable to a bias in favor of small capitalization stocks during a year in which the largest companies performed the best by a wide margin and poor performance of the active managers relative to the broad market.

The following graph shows one-year results as described above and also includes U.S. stock return comparisons for three, five, and ten year time periods.

**Domestic Equity Returns**



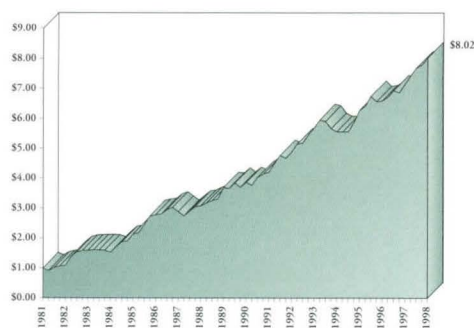
# *Schedule of U.S. Stock Brokerage Commissions Paid*

Year Ending June 30, 1998

Brokerage Firms	Shares Traded	Dollar Volume of Trades	Commission	
			Dollar Amount	Per Share
SALOMON BROTHERS INC.	8,366,451	\$ 370,334,431	\$ 84,441	\$ 0.010
INVESTMENT TECHNOLOGY GROUP INC.	5,319,652	243,531,630	130,058	0.024
D. E. SHAW	7,720,959	211,368,080	75,486	0.010
U.S.CLEARING CORPORATION	4,594,823	198,257,023	199,879	0.044
LYNCH, JONES & RYAN	3,200,616	120,666,397	79,069	0.025
ROBERT VAN SECURITIES, INC	2,710,900	94,432,094	104,887	0.039
ROCHDALE SECURITIES CORPORATION	1,610,515	72,647,261	32,210	0.020
BEAR STEARNS & CO.	1,390,335	69,438,728	69,932	0.050
GOLDMAN SACHS & CO.	1,582,244	67,949,904	44,608	0.028
GUZMAN & COMPANY	1,459,214	59,439,899	21,092	0.014
MORGAN STANLEY & CO.	1,626,400	55,855,994	65,526	0.040
INSTINET CORPORATION	1,711,350	48,176,886	59,758	0.035
CANTOR, FITZGERALD & CO.	2,560,668	46,828,555	123,922	0.048
GARDNER RICH & CO.	1,096,700	46,596,620	47,693	0.043
JEFFERIES & COMPANY	1,173,506	40,790,865	38,136	0.032
NATIONAL FINANCIAL SERVICES	2,556,951	40,580,323	126,932	0.050
SMITH BARNEY INC.	1,050,000	38,987,325	47,726	0.045
PRUDENTIAL BACHE SECURITIES	761,510	38,656,230	38,076	0.050
CHAPMAN & CO.	1,020,900	33,465,711	42,751	0.042
MAGNA SECURITIES CORPORATION	878,800	33,343,946	35,810	0.041
SANFORD C. BERNSTEIN & CO.	556,750	28,720,880	27,838	0.050
PAINE WEBBER JACKSON & CURTIS	581,260	28,032,734	28,728	0.049
PERSHING	505,900	17,825,723	26,464	0.052
CIBS OPPENHEIMER CORPORATION	591,330	17,666,456	29,197	0.049
REDWOOD SECURITIES GROUP	534,500	16,239,944	21,380	0.040
ROBERT W. BAIRD & CO.	373,700	10,921,747	13,911	0.037
LEHMAN BROTHERS INC.	324,400	10,855,499	15,137	0.047
J P MORGAN	417,300	10,451,268	23,320	0.056
NATIONSBANC	442,300	10,125,852	16,284	0.037
LEWCO SECURITIES	276,285	9,164,190	13,715	0.050
BHF SECURITIES CORPORATION	223,200	8,756,933	8,928	0.040
OTHERS (Includes 77 Brokerage Firms)	5,003,595	110,030,035	239,633	0.048
Total	62,223,014	\$2,210,139,163	\$1,932,527	\$ 0.031
Zero Commission trades excluded above	20,147,006	\$ 509,094,633		



Growth of a Dollar in Fixed Income



### Summary of Fixed Income Investments

Domestic fixed income, with a target allocation of 32.5%, serves to diversify the equity risk component within the fund. Bonds have traditionally been regarded as a hedge in a disinflationary or deflationary environment. In most periods, fixed income has provided returns substantially in excess of the inflation rate, although not of the magnitude of equity returns. The cash flow predictability of bonds, however, makes the asset class less volatile than equities.

### Investment Portfolio Structure

As of June 30, 1998, 59.4% of the fixed income portfolio was passively managed.

Another 30.2% was managed in an enhanced index style, in which the manager's portfolio replicated certain sub-sectors of the bond market, while having some limited trading flexibility with the expectation of capturing additional return relative to the benchmark. The remaining 10.4% was managed in an active duration management style. The basic portfolio structure was implemented in December 1994. There was one strategic investment change in January 1998. A portion of the Treasury/Agency (Governments) allocation was moved to corporate bonds and mortgage-backed securities. This was done to capture the long-term additional performance of higher yielding, fixed income securities, without significantly modifying the risk profile of MOSERS' fixed income fund.

The major sectors of the fixed income market can be divided among four classes. The Treasury/Agency (Governments) category, the highest quality and most liquid sector, represents 48.1% of the bond market. Corporates comprise 20.7% of the market. Mortgages account for 30.2% with the remaining 1.0 % apportioned to the asset-backed securities sector. The MOSERS' portfolio is structured in such a way as to be approximately market weighted in each of these sectors in the aggregate. MOSERS' allocation as of June 30, 1998, was 40.5% to Governments and 29.2% to Corporates, reflecting the previously mentioned overweighting. With each portfolio being confined to one specific area, MOSERS is able to capitalize on each manager's area of expertise. Overall portfolio duration will vary from the broad market by as much as two years, either longer or shorter depending upon the portfolio profile of the active duration manager.

### Market Value

As of June 30, 1998, the MOSERS' domestic fixed income portfolio had a market value of \$1.488 billion, representing 30.8% of the total fund.

### Fixed Income Statistics

The following table displays the statistical characteristics of the MOSERS' bond portfolio as of June 30, 1998 with comparisons shown to the portfolio's policy benchmark (Lehman Aggregate) and the prior fiscal year.

Characteristic	June 30, 1998 MOSERS'— Fixed Income	June 30, 1998 Lehman Aggregate	June 30, 1997 MOSERS'— Fixed Income
Total Number of Securities	192	6,860	204
Current Yield	5.8%	6.7 %	6.9 %
Yield to Maturity	6.0%	6.3 %	6.8 %
Average Life/Maturity	10.0 years	8.7 years	10.7 years
Adjusted Duration	5.6	4.5	5.5
Quality	AAA	AAA	AAA

Ten Largest Holdings June 30, 1998 <sup>4</sup>	Market Value	% of Total Domestic Bonds	Ten Largest Holdings June 30, 1997	Market Value	% of Total Domestic Bonds
USTB 6% 2/15/26	\$ 75,495,296	5.4%	FNMA 7% 2023-2027	\$ 82,465,152	6.9%
BT PYRAMID GOV SECS	74,254,061	5.3	USTB 6% 2/15/26	71,036,150	5.9
FHLMC 6.0% 2012-2016	35,138,908	2.5	GNMA 8% 2024-2026	31,174,645	2.6
USTN 7.875% 11/15/99	29,063,484	2.1	FHLB DISC. NT. 7/15/97	29,935,800	2.5
USTB 6.875% 8/15/25	28,802,444	2.1	USTN 7.875% 11/15/99	29,248,758	2.4
USTB 7.25% 8/15/22	27,161,912	2.0	FHLMC 6.5% 2010-2011	28,539,769	2.4
USTN 5.75% 11/30/02	26,754,709	1.9	USTB 6.875% 8/15/25	24,963,263	2.1
FHLMC 6.5% 2010-2013	26,541,155	1.9	USTN 4.75% 9/30/98	22,687,430	1.9
UST STRIPS 0% 11/15/21	24,344,778	1.7	GNMA 8.5% 2016-2017	20,467,162	1.7
USTB 7.875% 2/15/21	22,205,925	1.6	FHLMC 7.5% 2008-2012	19,940,307	1.7

<sup>4</sup>A complete list of holdings is available upon request.

key to holdings:

USTB=U.S. Treasury Bond

FNMA=Federal National Mortgage Assoc.

BT PYRAMID= High Quality Money Market Fund

UST STRIPS=0% Coupon US Treasury Obligation

FHLMC=Federal Home Loan Mortgage Corp.

FHLB=Federal Home Loan Bank

USTN=U.S. Treasury Note

GNMA=Government National Mortgage Assoc.

### *Fixed Income Investment Advisors*

As of June 30, 1998, MOSERS had contracts with two external investment advisors for the management of 40% of the fixed income portfolio. Internal management of 60% of the fixed income portfolio enables passive participation in a very significant segment of the bond market at a very low cost.

The following firms were under contract with MOSERS during all or some portion of FY98 for management of fixed income securities. Also displayed in this table are the managers' investment styles, FY98 ending portfolio market values, and the managerial fees paid in FY98.

Investment Advisor	Investment Style	Portfolio Market Value as of June 30, 1998	FY98 Mgmt Fee
BlackRock Financial Management Inc.	Enhanced Index Mortgage and Asset-backed Securities	\$ 426,019,118	\$ 325,000
Hoisington Investment Management Co.	Active Duration Treasury Securities	147,118,766	150,000
Total		\$ 1,411,318,224 <sup>5</sup>	\$ 475,000

<sup>5</sup>This total includes the two internally managed bond portfolios.

These portfolios had a market value of \$838,180,340 as of June 30, 1998.

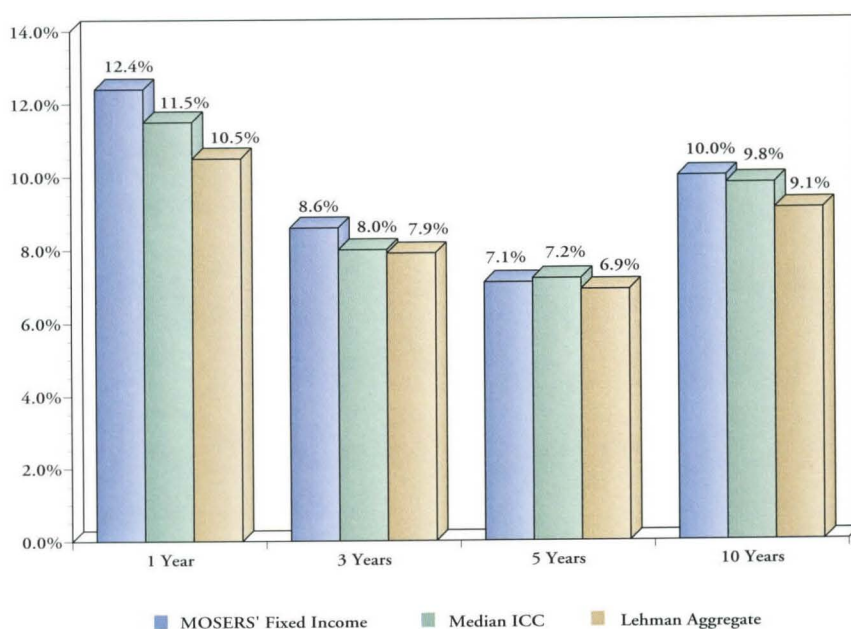


### Fixed Income Investment Returns

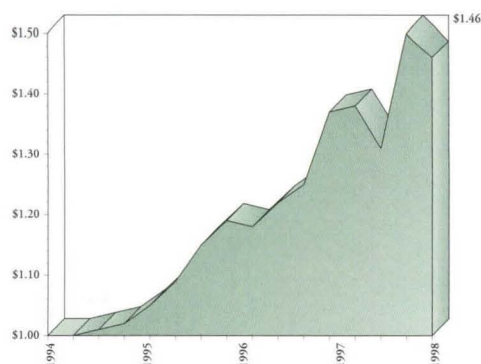
MOSERS' fixed income return for the fiscal year was 12.4%, which was above the return of its policy benchmark, the Lehman Aggregate Index, which finished at 10.5%. Within the ICC universe of fixed income returns for public pension plans, the MOSERS' return was greater than the median return of 11.5%. Relative to its policy benchmark, MOSERS has historically maintained a longer maturity profile in the fixed income portfolio, and, accordingly, outperformed in FY98 as interest rates were considerably lower at fiscal year end. Maturity selection is the overriding portfolio decision in explaining fixed income investment performance. The longer maturity portfolio strategy has served the fund well over the long term.

The following graph shows one-year results as described above and also includes fixed income return comparisons for three, five, and ten year time periods.

**Fixed Income Returns**



Growth of a Dollar in International Equities



### Summary of International Equity Investments

Non-U.S. stocks, with a target allocation of 17.5%, are employed by the fund primarily because their historical return premiums versus inflation, if realized in the future, will help preserve and enhance the fund's ability to achieve a long-term rate of return in excess of the 4% objective set by the board. Non-U.S. stocks are also attractive for the diversification benefits they provide to the portfolio. By incorporating non-U.S. stocks into the asset mix, MOSERS expects to achieve overall equity returns which are comparable to that of a U.S. stock portfolio while reducing overall portfolio risk.

### Investment Portfolio Structure

As of June 30, 1998, 43.6% of the non-U.S. stock portfolio was passively managed while 56.4% was managed actively. Non-U.S. stock investments consist of a Morgan Stanley Capital International Europe, Australia, and Far East (MSCI EAFE) Index portfolio and two active portfolios. In July 1995, the board hired an active developed market manager to complement the EAFE Index portfolio. In July 1996 the board hired an emerging markets manager to round out the global exposure. This manager's benchmark is the Morgan Stanley Capital International Emerging Markets Index (MSCI EMF). Another component of any international investment is the decision regarding whether or not to hedge currency exposure. The MOSERS' policy allows the active managers to hedge currency exposure up to 25%, while the passive portfolio is unhedged.

### Market Value

As of June 30, 1998, the MOSERS' non-U.S. stock portfolio had a market value of \$804 million, representing 17.6% of the total fund.

### International Equity Portfolio Statistics

The following table displays the statistical characteristics of the MOSERS' international stock portfolio as of June 30, 1998, with comparisons shown to the portfolio's policy benchmark, the MSCI EAFE/EMF Index and the prior fiscal year.

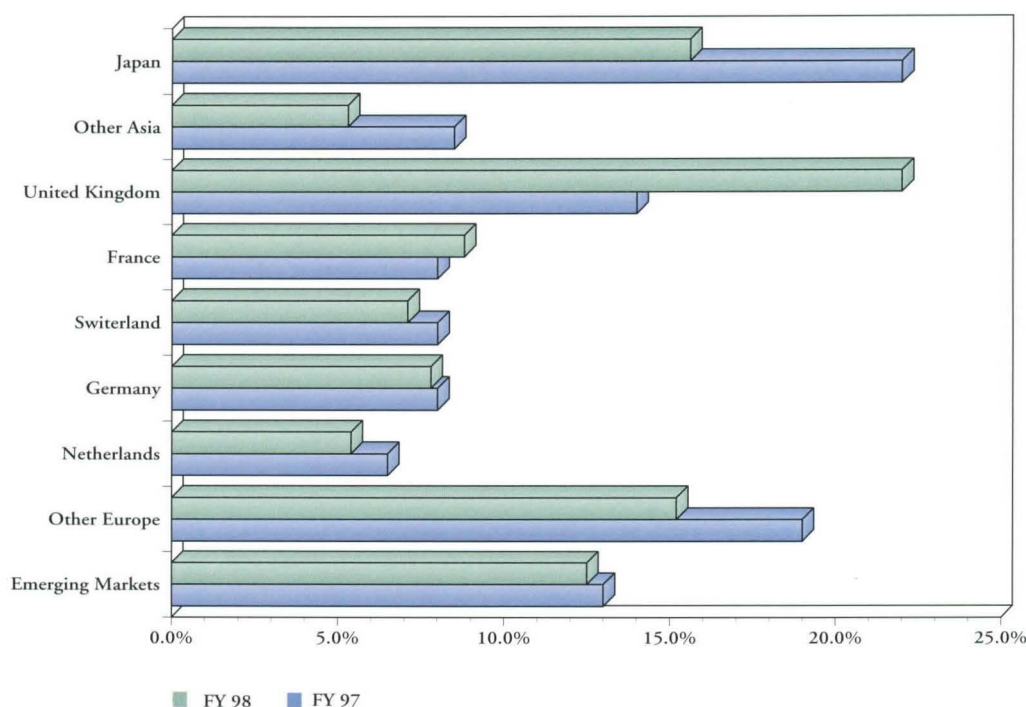
Characteristic	June 30, 1998 MOSERS'— Int'l Equity	June 30, 1997 MSCI EAFE/EMF	June 30, 1997 MOSERS'— Int'l Equity
Number of Securities	1,387	2,074	1,316
Avg. Market Capitalization	\$5.7 billion	\$5.6 billion	\$5.4 billion
Portfolio Yield	2.3%	1.9%	2.4%
Portfolio P/E	21.2x	26.0x	21.3x
Price/Book Ratio	2.2x	2.6x	2.0x

Ten Largest Holdings June 30, 1998 <sup>6</sup>	Market Value	% of Int'l Stocks	Ten Largest Holdings June 30, 1997	Market Value	% of Int'l Stocks
Nestle SA (Switzerland)	\$ 14,230,674	1.8%	Matsushita Electric (Japan)	\$ 9,291,532	1.3%
Gas Y Electricidad (Spain)	8,004,109	1.0	Nestle SA (Switzerland)	9,261,221	1.3
Credit Communal (France)	7,927,637	1.0	ING Groep (Netherlands)	8,403,488	1.2
Matsushita Electric (Japan)	7,857,273	1.0	Gas Y Electricidad (Spain)	7,562,037	1.1
ING Groep (Netherlands)	7,737,412	1.0	Hitachi Ord (Japan)	7,401,626	1.1
Sedgwick Group (UK)	7,663,341	1.0	Sainsbury (UK)	6,951,847	1.0
Bayer AG (Germany)	7,534,094	0.9	Fuji Photofilm (Japan)	6,845,924	1.0
ABN Amro Holding (Netherlands)	7,336,582	0.9	Philips Electronics (Netherlands)	6,790,633	1.0
Sainsbury (UK)	7,034,113	0.9	ABN Amro Holding (Netherlands)	6,594,937	0.9
Dairy Farm Intl (Singapore)	6,882,618	0.9	Bayer AG (Germany)	6,156,839	0.9

<sup>6</sup> A complete list of holdings is available upon request.



### MOSERS' International Country Allocation



The preceding chart displays how MOSERS' country exposure has changed during FY98.

#### International Equity Portfolio Investment Advisors

As of June 30, 1998, MOSERS had contracts with three external investment advisors for the management of non-U.S. stock portfolios. One firm is managing an active portfolio in developed markets that is expected to add incremental return over an established benchmark through stock selection, country selection, and small amounts of currency hedging. The second is under a similar mandate in the emerging markets. The third is a passive manager whose portfolio is expected to provide broad market diversification and is designed to track the performance of the developed non-U.S. market at a low cost.

The following firms were under contract with MOSERS during FY98 for management of non-U.S. stocks. Also displayed in this table are the managers' investment styles, FY98 ending portfolio market values, and the managerial fees paid in FY98.

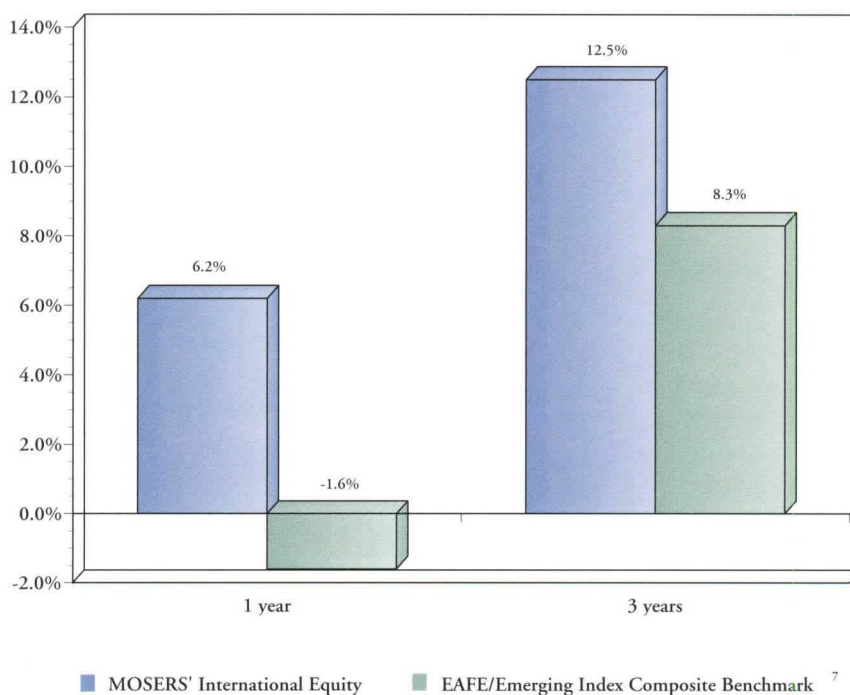
Investment Advisor	Investment Style	Portfolio Market Value as of June 30, 1998	FY98 Mgmt. Fee
Bankers Trust Company	Passive MSCI EAFE Index	\$ 350,632,340	\$ 241,114
Silchester International Investors Limited	Active Value - Developed Markets	358,493,221	1,405,163
Morgan Grenfell Investment Services Ltd.	Active Core - Emerging Markets	95,322,376	654,720
<b>Total</b>		<b>\$ 804,447,937</b>	<b>\$ 2,300,997</b>

### *International Equity Investment Returns*

MOSERS' non-U.S. stock return for the fiscal year was 6.2%, significantly in excess of its policy benchmark, the MSCI EAFE/ MSCI Emerging Markets Free Index, which finished at -1.6%. The portfolio return was increased by the strong performance of the active developed market manager. Returns on the mostly unhedged non-U.S. stock portfolio were lower than would have been the case with a fully hedged portfolio, due to a strengthening U.S. dollar over the course of the fiscal year.

The following graph shows results as described above. MOSERS' first allocation to non-U.S. stocks did not occur until July 1994, therefore five and ten year returns are not applicable. (ICC data is not available for this asset class.)

#### **International Equity Returns**



<sup>7</sup> Composite benchmark composed of 86% EAFE Index and 14% Emerging Markets Free Index.



## Cash and “Other” Investments Review

### *Summary of Cash Investments*

Cash investments are employed by the fund to meet liquidity needs and to provide MOSERS’ managers a vehicle for investment of funds during brief periods between the sale of an existing security and the purchase of a replacement. This portfolio generally represents between 1% and 2% of the total funds’ assets.

### *Investment Portfolio Structure*

The portfolio consists of high credit quality fixed income securities with investment guidelines designed to preserve principal and maintain liquidity.

### *Market Value*

As of June 30, 1998, the MOSERS’ cash portfolio had a market value of \$3.1 million, representing 0.1% of the total fund. While the year end balance was small, the average daily balance in this fund during the fiscal year was approximately \$13 million. The cash invested on behalf of managers averaged \$40 million over the same time period.

### *Cash Investment Advisor*

This portfolio is managed by MOSERS’ internal staff.

### *Cash Investment Returns*

MOSERS’ cash return for the fiscal year was 5.9%. This compares favorably with the benchmark 90-day T-bill return of 5.3%.

### *Summary of “Other” Investments*

Included in this portfolio is a guaranteed investment contract (GIC), shares in a real estate commingled fund, three real estate properties, and a small amount of residual venture capital investments. The GIC represents approximately 30% of this portfolio and will mature in FY99. MOSERS’ venture capital investments were first funded in 1985, after the industry had posted several years of extraordinary returns. Due to the high management expenses and the illiquidity associated with venture investments, MOSERS has made no new allocations since 1990. The remaining real estate in this portfolio is expected to be sold during FY99.

### *Investment Portfolio Structure*

MOSERS’ “other” investments portfolio will be reduced to a zero balance over the course of the next several months as the remaining assets mature or are sold.

### *Market Value*

As of June 30, 1998 the “other” investments portfolio had a market value of \$13.1 million, representing 0.3% of the total fund.

### *“Other” Investments Advisor*

This portfolio is managed by MOSERS’ internal staff.

## Schedule of Investment Manager Portfolios by Asset Class

Year Ending June 30, 1998

	Market Value June 30, 1997	Net Flows In/Out of Sector	Income Earned	Change in Market Value	Market Value June 30, 1998	Percent of Total Fund
<i>Passive U.S. stock manager portfolios</i>						
Large company stock portfolios	\$ 938,734,857	\$ (78,358,014)	\$ 17,772,296	\$251,736,913	\$1,129,886,052	24.7%
Medium/Small company stock portfolio	380,688,383	(36,900,000)	12,128,544	60,504,823	416,421,750	9.1
<b>Total passive U.S. stock manager portfolios</b>	<b>1,319,423,240</b>	<b>(115,258,014)</b>	<b>29,900,840</b>	<b>312,241,736</b>	<b>1,546,307,802</b>	<b>33.8</b>
<i>Active U.S. stock manager portfolios</i>						
Large company stock portfolios	291,592,550	(21,078,888)	4,731,667	40,083,237	315,328,566	6.9
Medium/small company stock portfolios	361,292,084	48,832,008	4,924,131	70,121,308	485,169,531	10.6
<b>Total active U.S. stock manager portfolios</b>	<b>652,884,634</b>	<b>27,753,120</b>	<b>9,655,798</b>	<b>110,204,545</b>	<b>800,498,097</b>	<b>17.5</b>
<i>Non-U.S. stock manager portfolios</i>						
Passive EAFE index portfolio	311,818,749	17,000,000	5,299,611	16,513,980	350,632,340	7.7
Active value developed markets portfolio	302,897,636	(6,500,000)	6,895,358	55,200,227	358,493,221	7.8
Active core emerging markets portfolio	89,262,272	42,000,000	2,012,105	(37,952,001)	95,322,376	2.1
<b>Total non-U.S. stock manager portfolios</b>	<b>703,978,657</b>	<b>52,500,000</b>	<b>14,207,074</b>	<b>33,762,206</b>	<b>804,447,937</b>	<b>17.6</b>
<b>Total stock portfolios</b>	<b>2,676,286,531</b>	<b>(35,004,894)</b>	<b>53,763,712</b>	<b>456,208,487</b>	<b>3,151,253,836</b>	<b>68.8</b>
<i>Fixed income manager portfolios</i>						
Government bond portfolios	599,364,365	(111,113,000)	38,739,373	46,165,880	573,156,618	12.5
Corporate bond portfolio	239,917,546	141,863,000	21,171,223	9,190,719	412,142,488	9.0
Mortgage & asset-backed securities portfolio	361,370,251	29,000,000	24,360,721	11,288,146	426,019,118	9.3
<b>Total fixed income manager portfolios</b>	<b>1,200,652,162</b>	<b>59,750,000</b>	<b>84,271,317</b>	<b>66,644,745</b>	<b>1,411,318,224</b>	<b>30.8</b>
<i>Other portfolios</i>						
"Other" investments portfolio	34,753,337	(29,407,663)	1,359,335	6,353,148	13,058,157	0.3
Cash reserve portfolio	9,013,533	(6,662,457)	770,307	0	3,121,383	0.1
<b>Total other portfolios</b>	<b>43,766,870</b>	<b>(36,070,120)</b>	<b>2,129,642</b>	<b>6,353,148</b>	<b>16,179,540</b>	<b>0.4</b>
<b>Total all portfolios</b>	<b>\$3,920,705,563</b>	<b>\$ (11,325,014)</b>	<b>\$140,164,671</b>	<b>\$529,206,380</b>	<b>\$4,578,751,600</b>	<b>100.0%</b>

### Reconciliation to statement of plan net assets

Total portfolio value	\$4,578,751,600
Short-term investment funds	(118,259,729)
Uninvested cash	(338,248)
Accrued income	(22,736,390)
Accounts receivable - securities sold	(169,482,690)
Accounts payable - securities purchased	179,690,601
<b>Investments per statement of plan net assets.</b>	<b>\$4,447,625,144</b>





*The best things in life are laughter,  
friendship, and security in your future.*





**GABRIEL, ROEDER, SMITH & COMPANY**

**Consultants & Actuaries**

24 Woodbine Avenue • Northport, New York 11768 • 516-757-0047 • 800-782-0144 • FAX 516-757-0086

September 22, 1998

The Board of Trustees  
Missouri State Employees' Retirement System  
907 Wildwood Drive  
Jefferson City, MO 65109

Dear Board Members:

The basic financial objective of the Missouri State Employees' Retirement System (MOSERS) is to establish and receive contributions which

- (1) when expressed in terms of percents of active member payroll will remain approximately level from generation to generation of Missouri citizens, and which
- (2) when combined with present assets and future investment return will be sufficient to meet the present and future financial obligations of MOSERS.

In order to measure progress toward this fundamental objective, MOSERS has annual actuarial valuations performed. The valuations (i) measure present financial position, and (ii) establish contribution rates that provide for the current cost and level percent of payroll amortization of unfunded actuarial accrued liabilities over a reasonable period. The latest completed actuarial valuations were based upon data and assumptions as of June 30, 1998. These valuations indicate that the contribution rates, established by the Board of Trustees for benefits then in effect, meet the basic financial objective. These contribution rates are 11.91% of payroll for 54,544 general state employees, 20.10% of payroll for 42 administrative law judges, and 53.92% of payroll for 365 judges other than administrative law judges.

The actuarial valuations are based upon financial and participant data which is prepared by retirement system staff, assumptions regarding future rates of investment return and inflation, and rates of retirement, turnover, death, and disability among MOSERS' members and their beneficiaries. The data is reviewed by us for internal and year-to-year consistency as well as general reasonableness prior to its use in the actuarial valuations. It is also summarized and tabulated for the purpose of analyzing trends. The assumptions were adopted by the Board of Trustees and were based upon actual experience of MOSERS during the years 1991 to 1995. Assets are valued according to a method that fully recognizes expected investment return and averages unanticipated market return over a three-year period. The assumptions and methods utilized in this valuation, in our opinion, meet the parameters established by Governmental Accounting Standards Board Statement No. 25.

The current benefit structure is outlined in the actuarial section. The changes made since the previous valuation are highlighted on page 83. We provided the information used in the supporting schedules in the actuarial section and the Schedules of Funding Progress in the financial section, as well as the employer contribution rates shown in the Schedule of Employer Contributions in the financial section.

Based upon the valuation results, it is our opinion that the Missouri State Employees' Retirement System continues in sound condition in accordance with actuarial principles of level percent of payroll financing.

Respectfully submitted,

  
Thomas J. Cavanaugh, F.S.A.  
Senior Consultant & Actuary

  
Michael L. Falco, A.S.A.  
Actuary



Missouri State Employees' Plan  
*Summary of Actuarial Assumptions*  
 June 30, 1998

*Economic Assumptions*

The investment return rate used in the valuations was 8.5% per year, compounded annually (net after investment expenses). This assumption is used to make money payable at one point in time equal in value to a different amount of money payable at another point in time.

Pay increase assumptions for individual active members are shown for sample ages on page 64. Part of the assumption for each age is for merit and/or seniority increase, and the other 4.5% recognizes wage inflation. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.

The active member payroll is assumed to increase 4.5% annually, which is the portion of the individual pay increase assumptions attributable to inflation.

Future cost-of-living adjustments (COLAs) are assumed to be 4.25% per year when a minimum COLA of 4% is in effect; 3.6% per year when no minimum COLA is in effect.

The number of active members is assumed to continue at the present number.

*Non-Economic Assumptions*

The mortality table, for post-retirement mortality, used in evaluating allowances to be paid was the 1971 Group Annuity Mortality Table, projected to the year 2000, with a one-year age setback for men and a seven-year age setback for women. Related values are shown on page 65. This assumption is used to measure the probabilities of each benefit payment being made after retirement.

The probabilities of age and service retirement are shown on page 65. It is assumed that each member will be eligible for one-half year of service credit for unused leave at retirement.

The probabilities of withdrawal from service, disability, and death-in-service are shown for sample ages on page 64. For disability retirement, impaired longevity was recognized by use of special mortality tables.

The entry age normal actuarial cost method of valuation was used in determining liabilities and normal cost.

Differences in the past between assumed experience and actuarial experience ("actuarial gains and losses") become part of actuarial accrued liabilities.

Unfunded actuarial accrued liabilities are amortized to produce payments, (principal and interest) which are level percent of payroll contributions.

Employer contribution dollars were assumed to be paid in equal installments throughout the employer fiscal year.

The asset valuation method fully recognizes expected investment return and averages unanticipated market return over a three-year period.

The data about persons now covered and about present assets was furnished by the system's administrative staff. Although examined for general reasonableness, the data was not audited by the actuary.

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (M.A.A.A.).

Missouri State Employees' Plan  
*Summary of Actuarial Assumptions*  
June 30, 1998

Separations From Active Employment Before Service Retirement  
and Individual Pay Increase Assumptions

Sample Ages	Years of Service	Percent of Active Members Separating Within the Next Year						Pay Increase Assumptions for an Individual Employee		
		Withdrawal		Death		Disability		Merit & Seniority	Base (Economy)	Increase Next Year
		Men	Women	Men	Women	Men	Women			
	0	28.0%	28.0%							
	1	16.0	16.0							
	2	13.0	13.0							
	3	12.0	12.0							
	4	10.0	10.0							
20	+5	10.0	10.0	.04%	.03%	.00%	.00%	2.7%	4.5%	7.2%
25		10.0	10.0	.04	.04	.04	.02	2.6	4.5	7.1
30		8.8	8.2	.05	.04	.10	.03	2.2	4.5	6.7
35		6.2	5.8	.07	.05	.14	.10	1.9	4.5	6.4
40		4.4	4.7	.10	.07	.18	.15	1.4	4.5	5.9
45		3.4	4.2	.15	.09	.26	.19	1.2	4.5	5.7
50		2.7	3.7	.27	.14	.36	.53	0.7	4.5	5.2
55		1.9	2.6	.49	.24	.69	.74	0.7	4.5	5.2
60		1.2	1.4	.77	.44	1.98	1.59	0.0	4.5	4.5
65		1.0	1.0	1.20	.71	0.00	0.00	0.0	4.5	4.5



Single Life Retirement Values

Sample Attained Ages	Present Value of \$1/Month the First Year Increasing 4.25% Yearly				Future Life Expectancy (Years)			
	Service		Disability		Service		Disability	
	Men	Women	Men	Women	Men	Women	Men	Women
40	\$ 214.64	\$ 226.72	\$ 140.38	\$ 164.15	38.46	44.22	19.70	26.02
45	202.28	216.86	130.41	156.72	33.73	39.41	17.50	23.70
50	187.99	204.92	119.42	148.39	29.17	34.67	15.35	21.39
55	171.91	190.99	108.73	139.83	24.82	30.06	13.43	19.18
60	153.85	175.27	99.75	130.57	20.70	25.67	11.87	17.01
65	133.91	157.64	92.34	120.03	16.82	21.50	10.56	14.82
70	113.09	138.02	83.34	107.15	13.32	17.57	9.13	12.50
75	93.21	117.24	71.60	90.70	10.36	13.99	7.49	10.00
80	74.25	97.10	56.64	72.75	7.83	10.91	5.66	7.62
85	58.38	77.87	42.52	56.64	5.89	8.29	4.08	5.66

Percent of Eligible Active Members Retiring Next Year

Retirement Ages	Percent	
	Men	Women
50	25.0%	25.0%
51	25.0	25.0
52	25.0	25.0
53	25.0	25.0
54	25.0	25.0
55	5.0	5.0
56	5.0	5.0
57	5.0	5.0
58	5.0	5.0
59	5.0	8.0
60	10.0	10.0
61	20.0	20.0
62	30.0	35.0
63	20.0	20.0
64	30.0	30.0
65	45.0	45.0
66	35.0	25.0
67	30.0	25.0
68	20.0	25.0
69	20.0	25.0
70	30.0	30.0
71	20.0	25.0
72	20.0	25.0
73	20.0	30.0
74	20.0	30.0
75 & Over	100.0%	100.0%

## ***Pension Trust Funds***

### ***Summary of Member Data Included in Valuation***

June 30, 1998

#### ***Active Members***

Valuation Group	Number	Payroll	Group Averages		
			Salary	Age (Yrs)	Service (Yrs)
<i>Missouri State Employees' Plan</i>					
Regular state employees	49,170	\$ 1,245,968,195	\$ 25,340	42.2	9.5
Elected officials	6	522,420	87,070	52.7	9.0
Legislative clerks	149	2,687,050	18,034	47.0	9.9
Legislators	196	5,418,072	27,643	50.1	8.4
Uniformed water patrol	79	2,697,882	34,150	37.6	11.6
Conservation department	1,458	48,353,486	33,164	42.7	13.7
Contract employees	3,486	154,065,098	44,195	48.6	13.1
Total MSEP group	54,544	\$ 1,459,712,203	\$ 26,762	42.7	9.9
<i>Administrative Law Judges' and Legal Advisors' Plan</i>					
	42	\$ 2,806,436	\$ 66,820	45.9	8.5
<i>Non-funded Judicial Plan</i>					
	365	\$ 32,446,141	\$ 88,894	52.3	11.2

#### ***Retired Lives***

Type of Benefit Payment	Number	Annual Benefits	Group Averages	
			Benefit	Age (Yrs)
<i>Missouri State Employees' Plan</i>				
Retirement	14,603	\$ 133,270,320	\$ 9,126	71.9
Disability	67	270,924	4,044	57.3
Survivor of active member	864	4,251,804	4,921	58.7
Survivor of retired member	717	4,683,288	6,532	72.4
Total MSEP group	16,251	\$ 142,476,336	\$ 8,767	71.1
<i>Administrative Law Judges' and Legal Advisors' Plan</i>				
	23	\$ 694,644	\$ 30,202	71.6
<i>Non-funded Judicial Plan</i>				
	342	\$ 11,663,604	\$ 34,104	75.5

#### ***Others***

Group	Terminated Vested	Leave of Absence	Long-Term Disability
<b><i>Missouri State Employees' Plan</i></b>	10,485	293	899
<b><i>Administrative Law Judges' and Legal Advisors' Plan</i></b>	14	0	0
<b><i>Non-funded Judicial Plan</i></b>	62	0	2



# Missouri State Employees' Plan

## Active Members by Attained Age and Years of Service

June 30, 1998

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	56							56	\$ 818,103
20-24	1,978	17						1,995	35,331,692
25-29	5,088	699	32					5,819	126,015,214
30-34	3,507	2,047	735	44				6,333	151,939,529
35-39	2,922	1,884	1,643	770	70			7,289	186,407,179
40-44	2,689	1,782	1,603	1,226	918	70		8,288	223,945,894
45-49	2,303	1,740	1,490	1,180	1,475	745	54	8,987	259,359,242
50-54	1,592	1,344	1,241	926	1,042	1,022	360	7,527	223,694,803
55-59	968	837	856	601	645	504	485	4,896	148,560,225
60	112	137	123	103	93	78	91	737	22,796,532
61	94	106	111	60	77	62	81	591	17,947,240
62	75	94	137	82	53	44	75	560	16,892,972
63	57	73	89	37	38	35	40	369	11,222,453
64	40	65	66	42	24	26	37	300	9,728,228
65	20	54	42	42	20	16	18	212	7,030,218
66	20	36	25	20	18	17	16	152	4,796,610
67	18	14	23	10	9	8	12	94	3,055,654
68	9	17	20	10	7	7	9	79	2,483,522
69	8	12	15	8	10	6	7	66	2,141,406
70 & Over	21	18	47	34	34	15	25	194	5,545,487
Totals	21,577	10,976	8,298	5,195	4,533	2,655	1,310	54,544	\$ 1,459,712,203

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

### Group Averages:

Age	42.7 Years
Service	9.9 Years
Annual Pay	\$26,762

***Administrative Law Judges' and Legal Advisors' Plan***  
***Active Members by Attained Age and Years of Service***  
June 30, 1998

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
30-34	2	2						4	\$ 219,362
35-39	3	6						9	579,480
40-44	3	3						6	390,926
45-49	1	3	6					10	713,680
50-54	3	2	1	1				7	482,955
55-59		1			1			2	144,807
61	1				1			2	143,842
70 & Over			1				1	2	131,384
Totals	13	17	8	1	2	0	1	42	\$ 2,806,436

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

**Group Averages:**

Age	45.9 Years
Service	8.5 Years
Annual Pay	\$66,820



# Judicial Plan

## Active Members by Attained Age and Years of Service

June 30, 1998

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
30-34	1							1	\$ 82,816
35-39	12	4						16	1,336,444
40-44	21	10	5	3				39	3,385,650
45-49	25	24	13	19	1			82	7,400,179
50-54	22	29	16	17	11			95	8,387,915
55-59	11	12	12	13	8	2	2	60	5,325,881
60	1	4	1	3	2			11	985,202
61	1	1	1	1		1		5	455,214
62	1	2	2	2	1	1		9	804,772
63		1	2	3	2			8	733,084
64	1			1	1	1	1	5	447,464
65				2	1	3		6	586,038
66	1	2	1	2		2		8	718,168
67			1	2	1		1	5	436,336
68			2	3	1	1	1	8	729,296
69		1	2	1		1	1	6	548,866
70 & Over					1			1	82,816
Totals	97	90	58	72	30	12	6	365	\$ 32,446,141

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

### Group Averages:

Age	52.3 Years
Service	11.2 Years
Annual Pay	\$88,894

Missouri State Employees' Retirement System  
*Schedule of Active Member Valuation Data*  
Six Years Ended June 30, 1998

*Missouri State Employees' Plan*

Schedule of Active Member Valuation Data				
Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
June 30, 1993	47,954	\$ 1,063,246,615	\$ 22,172	0.32%
June 30, 1994	49,436	1,124,862,008	22,754	2.62
June 30, 1995	50,524	1,198,938,042	23,730	4.29
June 30, 1996	51,425	1,267,605,000	24,650	3.88
June 30, 1997	52,737	1,359,656,666	25,782	4.59
June 30, 1998	54,544	1,459,712,203	26,762	3.80

*Administrative Law Judges' and Legal Advisors' Plan*

Schedule of Active Member Valuation Data				
Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
June 30, 1993	34	\$ 1,931,355	\$ 56,805	2.06%
June 30, 1994	36	2,094,062	58,168	2.40
June 30, 1995	37	2,166,275	58,548	0.65
June 30, 1996	46	2,706,314	58,833	0.49
June 30, 1997	45	2,865,733	63,683	8.24
June 30, 1998	42	2,806,436	66,820	4.93

*Judicial Plan*

Schedule of Active Member Valuation Data				
Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
June 30, 1993	355	\$ 26,641,236	\$ 75,046	0.05%
June 30, 1994	354	27,006,602	76,290	1.66
June 30, 1995	357	27,984,008	78,387	2.75
June 30, 1996	366	29,908,056	81,716	4.25
June 30, 1997	365	31,663,101	86,748	6.16
June 30, 1998	365	32,446,141	88,894	2.47



Missouri State Employees' Retirement Plan  
*Retirees and Beneficiaries Added and Removed*  
 Ten Years Ended June 30, 1998

	Beginning Balance	Additions	Deletions	Ending Balance
<i><b>FY89</b></i>				
Retirees	9,961	966	553	10,374
Beneficiaries	651	105	36	720
<i><b>FY90</b></i>				
Retirees	10,374	866	540	10,700
Beneficiaries	720	102	27	795
<i><b>FY91</b></i>				
Retirees	10,700	898	467	11,131
Beneficiaries	795	91	22	864
<i><b>FY92</b></i>				
Retirees	11,131	936	460	11,607
Beneficiaries	864	117	36	945
<i><b>FY93</b></i>				
Retirees	11,607	996	502	12,101
Beneficiaries	945	107	38	1,014
<i><b>FY94</b></i>				
Retirees	12,101	957	542	12,516
Beneficiaries	1,014	168	47	1,135
<i><b>FY95</b></i>				
Retirees	12,516	1,186	561	13,141
Beneficiaries	1,135	154	46	1,243
<i><b>FY96</b></i>				
Retirees	13,141	1,108	600	13,649
Beneficiaries	1,243	154	42	1,355
<i><b>FY97</b></i>				
Retirees	13,649	1,107	612	14,144
Beneficiaries	1,355	153	43	1,465
<i><b>FY98</b></i>				
Retirees	14,144	1,153	627	14,670
Beneficiaries	1,465	183	67	1,581

Administrative Law Judges' and Legal Advisors' Plan  
*Retirees and Beneficiaries Added and Removed*  
 Ten Years Ended June 30, 1998

	Beginning Balance	Additions	Deletions	Ending Balance
<i>FY89</i>				
Retirees	6	1	0	7
Beneficiaries	0	0	0	0
<i>FY90</i>				
Retirees	7	2	0	9
Beneficiaries	0	0	0	0
<i>FY91</i>				
Retirees	9	3	1	11
Beneficiaries	0	2	0	2
<i>FY92</i>				
Retirees	11	4	1	14
Beneficiaries	2	1	0	3
<i>FY93</i>				
Retirees	14	2	0	16
Beneficiaries	3	0	0	3
<i>FY94</i>				
Retirees	16	1	0	17
Beneficiaries	3	0	0	3
<i>FY95</i>				
Retirees	17	1	1	17
Beneficiaries	3	1	0	4
<i>FY96</i>				
Retirees	17	0	0	17
Beneficiaries	4	0	0	4
<i>FY97</i>				
Retirees	17	1	4	14
Beneficiaries	4	3	0	7
<i>FY98</i>				
Retirees	14	2	0	16
Beneficiaries	7	0	0	7



Judicial Plan

*Retirees and Beneficiaries Added and Removed*

Ten Years Ended June 30, 1998

	Beginning Balance	Additions	Deletions	Ending Balance
<i><b>FY89</b></i>				
Retirees	153	16	14	155
Beneficiaries	97	13	2	108
<i><b>FY90</b></i>				
Retirees	155	14	5	164
Beneficiaries	108	6	3	111
<i><b>FY91</b></i>				
Retirees	164	23	10	177
Beneficiaries	111	15	4	122
<i><b>FY92</b></i>				
Retirees	177	19	14	182
Beneficiaries	122	8	5	125
<i><b>FY93</b></i>				
Retirees	182	11	10	183
Beneficiaries	125	5	6	124
<i><b>FY94</b></i>				
Retirees	183	15	12	186
Beneficiaries	124	11	4	131
<i><b>FY95</b></i>				
Retirees	186	27	7	206
Beneficiaries	131	8	3	136
<i><b>FY96</b></i>				
Retirees	206	11	10	207
Beneficiaries	136	6	12	130
<i><b>FY97</b></i>				
Retirees	207	6	7	206
Beneficiaries	130	6	9	127
<i><b>FY98</b></i>				
Retirees	206	22	9	219
Beneficiaries	127	31	35	123

*Short-Term Solvency Test*  
Ten Years Ended June 30, 1998

*Missouri State Employees' Plan*

Fiscal Year	Actuarial Accrued Liabilities for						
	Member Contributions	Current Retirees and Beneficiaries	Active and Inactive Members, Employer Financed Portion	Net Assets Available for Benefits	Percentage of Actuarial Liabilities Covered by Net Asset Available for		
	(1)	(2)	(3)		(1)	(2)	(3)
1989	\$ 492,278	\$ 492,128,269	\$ 1,289,505,018	\$ 1,417,715,534	100.0%	100.0%	71.7%
1990	482,785	520,837,298	1,340,045,133	1,587,114,827	100.0	100.0	79.5
1991	465,307	587,489,069	1,464,646,384	1,793,370,043	100.0	100.0	82.3
1992	455,328	662,010,170	1,629,118,392	1,991,215,165	100.0	100.0	81.6
1993	448,909	743,697,883	1,703,075,268	2,236,558,739	100.0	100.0	87.6
1994	448,559	909,819,763	2,009,188,103	2,425,134,504	100.0	100.0	75.4
1995	448,559	1,010,431,608	2,139,916,413	2,649,077,134	100.0	100.0	76.6
1996	448,559	1,156,347,608	2,283,330,316	2,927,896,643	100.0	100.0	77.6
1997	448,501	1,552,966,747	2,930,632,553	3,580,974,502	100.0	100.0	69.2
1998	447,716	1,688,502,950	3,229,936,517	4,210,635,094	100.0	100.0	78.1

*Administrative Law Judges' and Legal Advisors' Plan*

Fiscal Year	Actuarial Accrued Liabilities for						
	Member Contributions	Current Retirees and Beneficiaries	Active and Inactive Members, Employer Financed Portion	Net Assets Available for Benefits	Percentage of Actuarial Liabilities Covered by Net Asset Available for		
	(1)	(2)	(3)		(1)	(2)	(3)
1989	\$ 0	\$ 2,109,119	\$ 4,341,140	\$ 3,348,429	100.0%	100.0%	28.5%
1990	0	2,479,268	3,789,264	4,093,598	100.0	100.0	42.6
1991	0	3,587,023	3,615,836	4,707,938	100.0	100.0	31.0
1992	0	4,910,423	2,572,992	5,247,546	100.0	100.0	13.1
1993	0	5,615,161	2,549,307	5,864,317	100.0	100.0	9.8
1994	0	5,973,718	2,793,014	6,229,224	100.0	100.0	9.1
1995	0	6,088,732	3,641,223	6,655,207	100.0	100.0	15.6
1996	0	6,196,526	4,079,837	7,258,814	100.0	100.0	26.0
1997	0	6,569,957	4,857,224	8,864,395	100.0	100.0	47.2
1998	0	7,415,852	5,471,056	10,285,233	100.0	100.0	52.4

*Judicial Plan*

Fiscal Year	Actuarial Accrued Liabilities for						
	Member Contributions	Current Retirees and Beneficiaries	Active and Inactive Members, Employer Financed Portion	Net Assets Available for Benefits	Percentage of Actuarial Liabilities Covered by Net Asset Available for		
	(1)	(2)	(3)		(1)	(2)	(3)
1989	\$ 0	\$ 51,985,358	\$ 45,419,078	\$ 0	100.0%	0.0%	0.0%
1990	0	50,907,136	50,993,604	0	100.0	0.0	0.0
1991	0	57,923,939	61,128,646	0	100.0	0.0	0.0
1992	0	64,240,019	62,900,515	0	100.0	0.0	0.0
1993	0	65,843,955	66,598,009	0	100.0	0.0	0.0
1994	0	70,477,754	71,117,871	0	100.0	0.0	0.0
1995	0	81,586,593	72,060,389	0	100.0	0.0	0.0
1996	0	86,145,180	75,588,930	0	100.0	0.0	0.0
1997	0	99,662,179	97,810,394	0	100.0	0.0	0.0
1998	0	108,392,273	99,187,524	0	100.0	0.0	0.0



Missouri State Employees' Plan  
*Derivation of Experience Gain (Loss)*  
 Year Ended June 30, 1998

Actual experience will never (except by coincidence) coincide with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year to year fluctuations are common. Detail on the derivation of the experience gain (loss) for the year ended June 30, 1998, is shown below.

	Funded Benefits \$ Millions
(1) UAAL* at start of year	903.1
(2) Normal cost from last valuation	126.4
(3) Actual employer contributions	152.1
(4) Interest accrual: $(1) \times .085 + [(2) - (3)] \times (.085 / 2)$	75.7
(5) Expected UAAL before changes: $(1) + (2) - (3) + (4)$	953.1
(6) Change from any changes in benefits, assumptions, or methods	0.0
(7) Expected UAAL after changes: $(5) + (6)$	953.1
(8) Actual UAAL at end of year	708.3
(9) Gain (loss) $(7) - (8)$	244.8
(10) Gain (loss) as a percent of actuarial accrued liabilities at start of year (\$4,484)	5.5%

\*Unfunded actuarial accrued liability.

Valuation Date June 30	Actuarial Gain (Loss) as a % of Beginning Accrued Liabilities
1994	2.9%
1995	0.6
1996	0.4
1997	5.5
1998	5.5

## Summary of Plan Provisions

This summary describes the plan provisions of the Revised Statutes of Missouri (RSMo), as amended, that governed the programs which MOSERS administered during the period covered by this report. It does not overrule any applicable statute or administrative rule and, in the event of a conflict, the applicable statute or rule would apply.

### General Employee Retirement Plan

As of 6/30/98

Plan Provision	Requirement
<i>Membership Eligibility</i>	Members who work in a position normally requiring at least 1,000 hours of work a year who are not simultaneously accumulating creditable service under another retirement program supported by state contributions (other than social security).
<i>Normal Retirement Eligibility</i>	Age 65 and active with 4 years service Age 65 with 5 years service Age 60 with 15 years service Rule of 80/minimum age 50
<i>Early Retirement Eligibility</i>	Age 55 with at least 10 years service with reduced benefits.
<i>Benefit Formula</i>	The greater of 1.6% of the average highest 36 consecutive months of salary times creditable service or \$15 times full years of creditable service.
<i>Creditable Service</i>	Combination of the creditable prior service a member accrued before becoming a member of MOSERS and the years and full months of membership service the member has as a member of MOSERS.
<i>Vesting</i>	Five years of vesting service is required for establishing benefit eligibility.
<i>Cost-of-Living Adjustment (COLA)</i>	Annual COLAs equivalent to 80% of the previous year's change in the consumer price index (CPI) with a floor of 4% (for members hired prior to August 28, 1997) and a ceiling of 5% until the cumulative amount of COLAs equal 65% of the original benefit. Thereafter, the 4% floor is eliminated.
<i>Survivor Benefit (Death Before Retirement)</i>	A joint and 100% survivor benefit, based on the member's accrued benefit, will be paid to the eligible surviving spouse, or 50% of the accrued benefit to eligible children if there is no surviving spouse, provided the member is fully vested.
<i>Optional Form of Payment</i>	<p>A member may choose one of the following options at retirement:</p> <p><u>Life Income Annuity.</u> A benefit is paid for the member's lifetime only. No benefit continues to a survivor after death.</p> <p><u>Unreduced Joint &amp; 50% Survivor Option.</u> Upon death of the member, the spouse receives 50% of the benefit the retired member was receiving on the date of death provided the spouse was married to the member and named on the application at the date of retirement (applicable to members retiring on or after October 1, 1984).</p> <p><u>Joint and 100% Survivor Option.</u> The member receives a reduced monthly benefit for life. Upon death of the member, the spouse receives a monthly benefit equal to 100% of the retirement benefit the member was receiving at the time of death provided the spouse was married to the member and named on the application at the date of retirement.</p> <p><u>Lifetime Income with Guaranteed Payments (60 or 120 months).</u> A member receives a reduced monthly benefit for life. If the member dies prior to receiving the guaranteed number of payments, the beneficiary will receive the remaining number of payments. If the member lives longer than the guaranteed number of payments, no payments will be made to the beneficiary.</p> <p>Under the Joint &amp; 100% Survivor Option, if the designated surviving spouse dies before the retiree, the retiree's benefit will "pop-up" or revert to the life income annuity amount effective the first of the month following the spouse's death.</p>



*Water Patrol Retirement Plan*  
As of 6/30/98

Plan Provision	Requirement
<i>Membership Eligibility</i>	Uniformed members who work in a position normally requiring at least 1,000 hours of work a year who are not simultaneously accumulating creditable service under another retirement program supported by state contributions (other than social security).
<i>Normal Retirement Eligibility</i>	Age 55 and active with 4 years service Age 55 with 5 years service Rule of 80/minimum age 50
<i>Early Retirement Eligibility</i>	No provision.
<i>Benefit Formula</i>	1.6% times the average highest 36 consecutive months of salary times creditable service increased by 33.3%.
<i>Creditable Service</i>	Combination of the creditable prior service a member accrued before becoming a member of MOSERS and the years and full months of membership service the member has as a member of MOSERS.
<i>Vesting</i>	Five years of vesting service is required for establishing benefit eligibility.
<i>Cost-of-Living Adjustment (COLA)</i>	Annual COLAs equivalent to 80% of the previous year's change in the consumer price index (CPI) with a floor of 4% (for members hired prior to August 28, 1997), and a ceiling of 5% until the cumulative amount of COLAs equal 65% of the original benefit. Thereafter, the 4% floor is eliminated.
<i>Survivor Benefit (Death Before Retirement)</i>	A joint and 100% survivor benefit, based on the member's accrued benefit, will be paid to the eligible surviving spouse, or 50% of the accrued benefit to eligible children if there is no surviving spouse, provided the member is fully vested.
<i>Optional Form of Payment</i>	<p>A member may choose one of the following options at retirement:</p> <p><u>Life Income Annuity.</u> A benefit is paid for the member's lifetime only. No benefit continues to a survivor after death.</p> <p><u>Unreduced Joint &amp; 50% Survivor Option.</u> Upon death of the member, the spouse receives 50% of the benefit the retired member was receiving on the date of death provided the spouse was married to the member and named on the application at the date of retirement (applicable to members retiring on or after October 1, 1984).</p> <p><u>Joint and 100% Survivor Option.</u> The member receives a reduced monthly benefit for life. Upon death of the member, the spouse receives a monthly benefit equal to 100% of the retirement benefit the member was receiving at the time of death provided the spouse was married to the member and named on the application at the date of retirement.</p> <p><u>Lifetime Income with Guaranteed Payments (60 or 120 months).</u> A member receives a reduced monthly benefit for life. If the member dies prior to receiving the guaranteed number of payments, the beneficiary will receive the remaining number of payments. If the member lives longer than the guaranteed number of payments, no payments will be made to the beneficiary.</p> <p>Under the Joint &amp; 100% Survivor Option, if the designated surviving spouse dies before the retiree, the retiree's benefit will "pop-up" or revert to the life income annuity amount effective the first of the month following the spouse's death.</p>

*Legislators' Retirement Plan*  
As of 6/30/98

Plan Provision	Requirement
<i>Membership Eligibility</i>	Must be a member of the General Assembly.
<i>Normal Retirement Eligibility</i>	Age 55 and completion of 3 full biennial assemblies.
<i>Early Retirement Eligibility</i>	No provision.
<i>Benefit Formula</i>	\$150 per month per biennial assembly.
<i>Creditable Service</i>	Combination of the creditable prior service a member has accrued before becoming a member of MOSERS and the years and full months of membership service the member has as a member of MOSERS.
<i>Vesting</i>	Completion of three full biennial assemblies is required for establishing benefit eligibility.
<i>Cost-of-Living Adjustment (COLA)</i>	Annual COLAs equivalent to 80% of the previous year's change in the consumer price index (CPI) with a floor of 4% (for members hired prior to August 28, 1997), and a ceiling of 5% until the cumulative amount of COLAs equal 65% of the original benefit. Thereafter, the 4% floor is eliminated.
<i>Survivor Benefit</i> <i>(Death Before and After Retirement)</i>	<u>Unreduced Joint &amp; 50% Survivor Option.</u> Upon the death of the member, 50% of the member's accrued benefit will be paid to the eligible surviving spouse provided the member is fully vested.



*Statewide Elected Officials' Retirement Plan*  
As of 6/30/98

Plan Provision	Requirement
<i>Membership Eligibility</i>	Must be elected to statewide office.
<i>Normal Retirement Eligibility</i>	Age 65 with 4 years Age 60 with 15 years Rule of 80/minimum age 50
<i>Early Retirement Eligibility</i>	Age 55 with at least 10 years service with reduced benefits.
<i>Benefit Formula</i>	12 years or more service will result in a benefit equivalent to 50% of the current statutory compensation for the highest office held. Less than 12 yrs., benefit is equivalent to 1.6% times creditable service times the highest 36 consecutive months of average compensation.
<i>Creditable Service</i>	Combination of the creditable prior service a member accrued before becoming a member of MOSERS and the years and full months of membership service the member has as a member of MOSERS.
<i>Vesting</i>	Completion of 4 years of vesting service is required for establishing benefit eligibility.
<i>Cost-of-Living Adjustment (COLA)</i>	Annual COLAs equivalent to 80% of the previous year's change in the consumer price index (CPI) with a floor of 4% (for members hired prior to August 28, 1997), and a ceiling of 5% until the cumulative amount of COLAs equal 65% of the original benefit. Thereafter, the 4% floor is eliminated.
<i>Survivor Benefit</i> <i>(Death After Retirement)</i>	<u>Unreduced Joint &amp; 50% Survivor Option.</u> Upon the death of the member, 50% of the member's accrued benefit will be paid to the eligible surviving spouse.

*Administrative Law Judges' and Legal Advisors' Retirement Plan*  
As of 6/30/98

Plan Provision	Requirement
<i>Membership Eligibility</i>	Must be an administrative law judge or legal advisor in the Division of Worker's Compensation, a member or legal counsel of the Labor and Industrial Relations Commission, or a member of the State Board of Mediation.
<i>Normal Retirement Eligibility</i>	Age 65 with 12 years of service Age 55 with 20 years service
<i>Early Retirement Eligibility</i>	Age 65 with less than 12 years service with benefit reduced based upon years of service relative to 12 years.
<i>Benefit Formula</i>	12 years or more service will provide a benefit equivalent to 50% of the average highest 12 consecutive months of salary received. Less than 12 years, benefit is 4.17% times creditable service times the average highest 12 consecutive months of compensation.
<i>Creditable Service</i>	Combination of the creditable prior service a member accrued before becoming a member of MOSERS and the years and full months of membership service the member has as a member of MOSERS.
<i>Vesting</i>	Immediate vesting.
<i>Cost-of-Living Adjustment (COLA)</i>	Annual COLAs equivalent to 80% of the previous year's change in the consumer price index (CPI) with a floor of 4% (for members hired prior to August 28, 1997), and a ceiling of 5% until the cumulative amount of COLAs equal 65% of the original benefit. Thereafter, the 4% floor is eliminated.
<i>Survivor Benefit (Death Before Retirement)</i>	The eligible spouse receives up to 50% of the benefit the member would have received based on service relative to 12 years.
<i>Survivor Benefit (Death After Retirement)</i>	<u>Unreduced Joint &amp; 50% Survivor Option.</u> Upon the death of the member, 50% of the member's accrued benefit will be paid to the eligible surviving spouse.



## Judicial Retirement Plan

As of 6/30/98

Plan Provision	Requirement
<i>Membership Eligibility</i>	Must be a judge.
<i>Normal Retirement Eligibility</i>	Age 62 with 12 years of service Age 60 with 15 years service
<i>Early Retirement Eligibility</i>	Age 62 with less than 12 years service or age 60 with less than 15 years service with benefit reduced based upon years of service relative to service required for full benefits.
<i>Benefit Formula</i>	12 years or more service will provide a benefit equivalent to 50% of the average monthly compensation of the highest judicial position held. Less than 12 years, benefit is 4.17% times creditable service times the average monthly compensation of the highest judicial position held.
<i>Creditable Service</i>	Combination of the creditable prior service a member accrued before becoming a member of MOSERS and the years and full months of membership service the member has as a member of MOSERS.
<i>Vesting</i>	Immediate vesting.
<i>Cost-of-Living Adjustment (COLA)</i>	Annual COLAs equivalent to 80% of the previous year's change in the consumer price index (CPI) with a floor of 4% (for members hired prior to August 28, 1997), and a ceiling of 5% until the cumulative amount of COLAs equal 65% of the original benefit. Thereafter, the 4% floor is eliminated.
<i>Survivor Benefit (Death Before Retirement)</i>	The eligible spouse receives 50% of the benefit the member would have received based on service to age 70.
<i>Survivor Benefit (Death After Retirement)</i>	<u>Unreduced Joint &amp; 50% Survivor Option.</u> Upon the death of the member, 50% of the member's accrued benefit will be paid to the eligible surviving spouse.

### Contributions

The plans previously described are non-contributory plans, with the entire cost paid by the state of Missouri. The contribution rate paid by the state for the general employee, water patrol, legislator and statewide elected officials retirement plan for fiscal year 1998 was 10.40% of the membership payroll. The benefits provided to judges and ALJs are funded separately. Judges' benefits are paid by the state on a "pay-as-you-go" basis, however, effective July 1, 1998, the plan will be funded on an actuarial basis. The benefits for ALJs are actuarially funded by the state. The state contributed 19.66% of the ALJs' payroll during fiscal year 1998.

## *Life Insurance Plans*

MOSERS administers basic and optional term life insurance plans for eligible state employees and retirees.

Active Members* as of 6/30/98	Requirement
<p><b><i>Basic Life Insurance</i></b> \$15,000 basic life insurance while actively employed.</p> <p><b><i>Optional Life Insurance</i></b> Additional life insurance may be purchased in multiples of annual salary up to a maximum of the lesser of six times annual salary (excluding any non-recurring, single sum payment) or \$800,000; or in a flat amount in multiples of \$1,000. A flat amount of spouse coverage may be purchased in multiples of \$1,000, up to a maximum of \$100,000; however, the amount of spouse coverage cannot exceed the amount of optional coverage the member has purchased.</p> <p>*Terminating employees may convert coverage up to the amount they had as an active employee at individual rates.</p>	<p>Actively employed in an eligible state position resulting in membership in MOSERS.</p> <p>Actively employed in an eligible state position resulting in membership in MOSERS.</p>

Retired Members as of 6/30/98	Requirement
<p><b><i>Basic Life Insurance at Retirement</i></b> \$5,000 basic life insurance.</p> <p><b><i>Optional Life Insurance at Retirement</i></b> An employee may retain up to the lesser of \$60,000 or the amount of optional life insurance coverage held at time of retirement at the group rate and may convert the remaining optional life insurance at individual rates.</p>	<p>Must retire directly from active employment.</p> <p>Must retire directly from active employment.</p>

## *Long Term Disability (LTD) Plan*

MOSERS administers the LTD plan for eligible state employees.

Plan	Provision
<p><b><i>General Employees, Legislators and Statewide Elected Officials*</i></b></p> <p><b><i>Water Patrol</i></b></p> <p><b><i>Judges</i></b></p>	<p>Eligible participants receive 60% of their compensation minus primary social security, worker's compensation, and employer provided income. Benefits commence after 120 days of disability or after sick leave expires, whichever occurs last. LTD benefits cease upon the earliest of when the disability ends, when retirement benefits begin, when the member returns to work, or upon the member's death.</p> <p>Uniformed members who are eligible for statutory occupational disability receive benefits equal to 50% of compensation at the time of disability. For non-occupational disabilities, eligible participants receive the same benefit as general employees.</p> <p>In addition to the disability benefits provided to general employees, judges also receive benefits under the state constitution. Participants receive 50% of salary until the current term expires.</p>

\*Members of MOSERS in a position normally requiring 1,000 hours of work a year are covered under the LTD plan, unless they work for a state agency which has its own LTD plan.

## Changes in Plan Provisions

### *House Bill 971*

On July 13, 1998, Governor Mel Carnahan signed into law House Bill 971 (HB971) – legislation which requires the state to assume financial responsibility for juvenile court personnel employed in multi-county circuits. Under this legislation, eligible juvenile court personnel will be able to participate in the state benefit program which includes membership in the Missouri State Employees' Retirement System (MOSERS).

HB971 also will allow a member of the Missouri General Assembly who is appointed to the Labor and Industrial Relations Commission or who is appointed as chairman to the Board of Mediation to receive two full years of creditable service in the Administrative Law Judges' and Legal Advisors' Plan (ALJLAP) for any biennial assembly or partial biennial assembly served or purchased. In addition, the legislation extends membership in

the ALJLAP to current and future administrative hearing commissioners and further allows administrative hearing commissioners to transfer all membership service earned in MOSERS' General Plan to the ALJLAP. Lastly, the legislation requires administrative hearing commissioners to have served the majority of their term (three years of a six year term) in order to qualify for benefits under the ALJLAP.

### *Senate Bill 910*

Governor Carnahan also signed Senate Bill 910 (SB910) on July 13 – legislation which revises several retirement provisions relating to the collection of child support and maintenance. Under this law, a pension benefit may be garnished for the non-payment of child support or maintenance with appropriate legal documentation.



*Missouri State Employees' Plan*  
*Actuarial Present Values*

June 30, 1998

Actuarial Present Value, June 30, 1998	Actuarial Present Value	Portion Covered by Future Normal Cost Contributions	Actuarial Accrued Liabilities
<i>Active members</i>			
Service retirement benefits based on services rendered before and likely to be rendered after valuation date	\$ 3,446,401,459	\$ 819,030,821	\$ 2,627,370,638
Disability benefits likely to be paid to present active members who become totally and permanently disabled	95,143,795	43,211,506	51,932,289
Survivor benefits likely to be paid to widows and children of present active members who die before retiring	110,845,604	37,142,897	73,702,707
Separation benefits likely to be paid to present active members			
Refunds of member contributions	447,716		
Deferred benefits	434,118,909		
Total	434,566,625	191,449,816	243,116,809
Active member totals	\$ 4,086,957,483	\$ 1,090,835,040	2,996,122,443
<i>Members on leave of absence and LTD</i>			
Service retirement benefits based on service rendered before the valuation date			56,250,292
<i>Terminated-vested members</i>			
Service retirement benefits based on service rendered before the valuation date			178,011,498
<i>Retired lives</i>			
Total actuarial accrued liability			1,688,502,950
Assets used in valuation			4,918,887,183
Unfunded actuarial accrued liability			4,210,635,094
			\$ 708,252,089

*Administrative Law Judges' and Legal Advisors' Plan*

*Actuarial Present Values*

June 30, 1998

Actuarial Present Value, June 30, 1998	Actuarial Present Value	Portion Covered by Future Normal Cost Contributions	Actuarial Accrued Liabilities
<i>Active members</i>			
Service retirement benefits based on services rendered before and likely to be rendered after valuation date	\$ 6,100,969	\$ 2,462,096	\$ 3,638,873
Disability benefits likely to be paid to present active members who become totally and permanently disabled	122,068	76,761	45,307
Survivor benefits likely to be paid to widows and children of present active members who die before retiring	330,802	220,161	110,641
Separation benefits likely to be paid to present active members	1,366,223	899,403	466,820
Active member totals	<u>\$ 7,920,062</u>	<u>\$ 3,658,421</u>	<u>4,261,641</u>
<i>Members on leave of absence and LTD</i>			
Service retirement benefits based on service rendered before the valuation date			0
<i>Terminated-vested members</i>			
Service retirement benefits based on service rendered before the valuation date			1,209,415
<i>Retired lives</i>			
Total actuarial accrued liability			<u>7,415,852</u>
Assets used in valuation			12,886,908
Unfunded actuarial accrued liability			<u>10,285,233</u>
			<u>\$ 2,601,675</u>

*Judicial Plan*  
*Actuarial Present Values*  
June 30, 1998

Actuarial Present Value, June 30, 1998	Actuarial Present Value	Portion Covered by Future Normal Cost Contributions	Actuarial Accrued Liabilities
<i>Active members</i>			
Service retirement benefits based on services rendered before and likely to be rendered after valuation date	\$ 129,249,797	\$ 44,572,633	\$ 84,677,164
Disability benefits likely to be paid to present active members who become totally and permanently disabled	2,157,567	1,514,600	642,967
Survivor benefits likely to be paid to widows and children of present active members who die before retiring	4,793,564	2,608,852	2,184,712
Active member totals	<u>\$ 136,200,928</u>	<u>\$ 48,696,085</u>	<u>87,504,843</u>
<i>Members on leave of absence and LTD</i>			
Service retirement benefits based on service rendered before the valuation date			787,947
<i>Terminated-vested members</i>			
Service retirement benefits based on service rendered before the valuation date			10,894,734
<i>Retired lives</i>			
Total actuarial accrued liability			<u>108,392,273</u>
Assets used in valuation			<u>207,579,797</u>
Unfunded actuarial accrued liability			<u>0</u>
			<u>\$ 207,579,797</u>



# STATISTICAL SECTION



*Take stock in your future today  
for a leisurely retirement tomorrow.*



### *Plan Membership*

Membership in the pension trusts administered by MOSERS increased by 2,745. Active members increased by 1,804, retired members and their beneficiaries increased by 653, and terminated-vested members increased by 288. Membership data for the last ten years ended June 30, 1998, can be found on page 89. Page 90 depicts the location of benefit recipients showing that the majority remain in the state of Missouri after retirement.

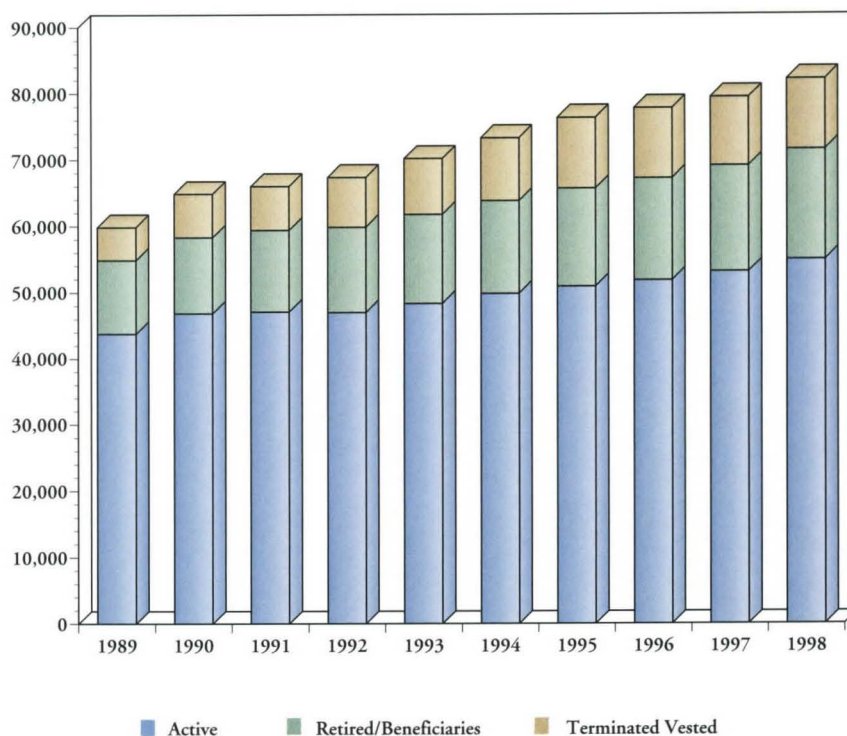
### *Net Assets vs. Liabilities*

The charts on page 91 graphically represent the funding progress of the pension plans for the ten years ended June 30, 1998. The chart on the top of page 91 compares the net assets held in trust for pension benefits to pension benefit liabilities. The top line illustrates the accrued liabilities of the plans funded on an actuarial basis and the bottom segment illustrates the net assets accumulated to fund those liabilities (identified by type of assets). The spread between the total accrued liabilities and the total net assets represents the unfunded actuarial accrued liabilities. The chart on the bottom of page 91 illustrates the funded ratio of the Missouri State Employees' Plan for the ten years ended June 30, 1998.

The existence of the unfunded actuarial accrued liabilities is not necessarily an indication of financial problems, but the fluctuations are important and should be monitored and controlled.

The remainder of this section contains various statistical and historical data considered useful in evaluating the condition of the plans.

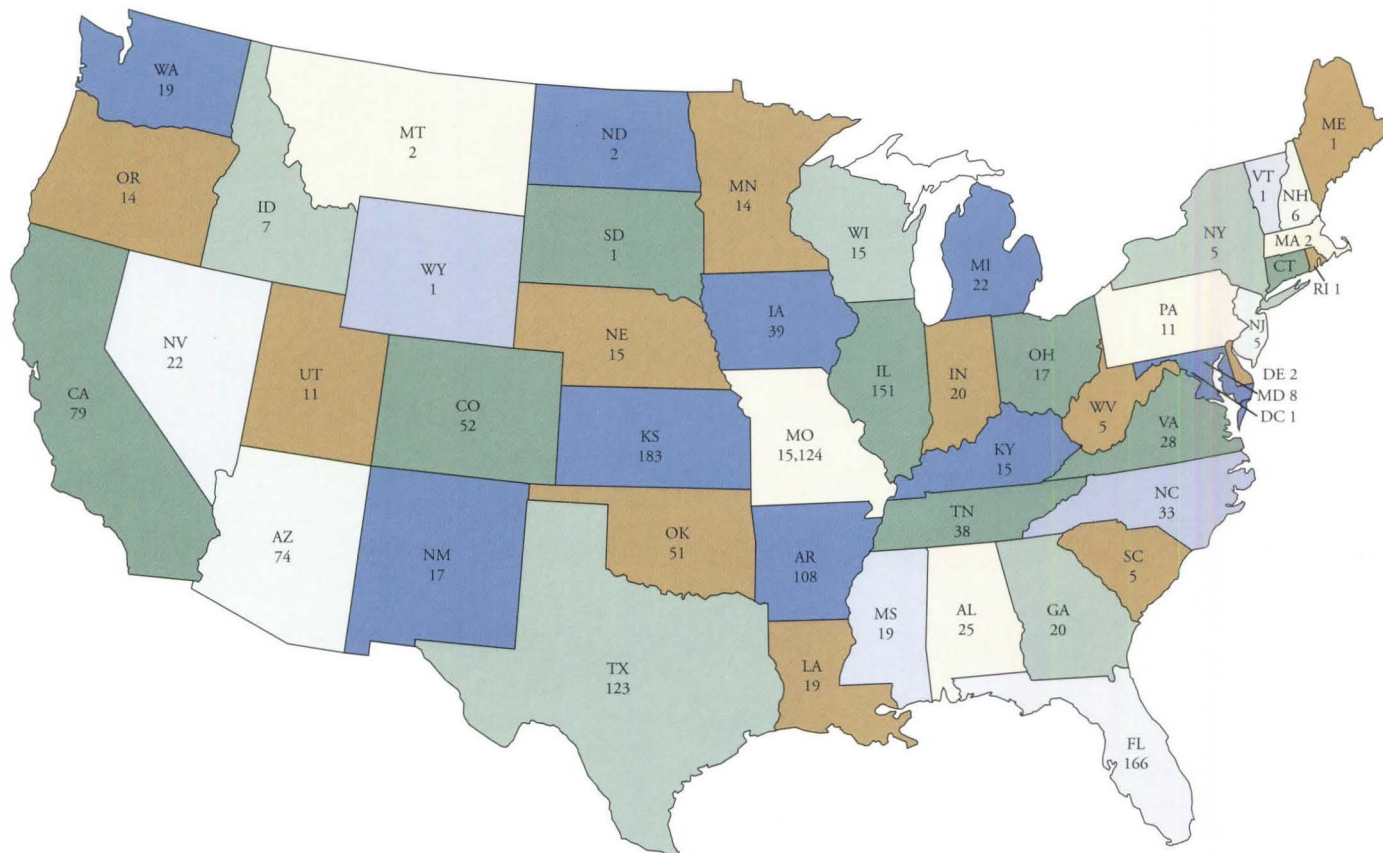
Missouri State Employees' Retirement System  
*Membership in Retirement Plans*  
 Last Ten Fiscal Years



Fiscal Year	Active	Retired/ Beneficiaries	Terminated Vested
1989	43,787	11,090	4,997
1990	46,834	11,495	6,544
1991	47,105	12,307	6,610
1992	46,999	12,876	7,484
1993	48,343	13,441	8,423
1994	49,826	13,988	9,499
1995	50,918	14,747	10,673
1996	51,837	15,362	10,548
1997	53,147	15,963	10,273
1998	54,951	16,616	10,561



Missouri State Employees' Retirement System  
*Distribution of Benefit Recipients by Location*  
 June 30, 1998



Recipients outside the continental US include:

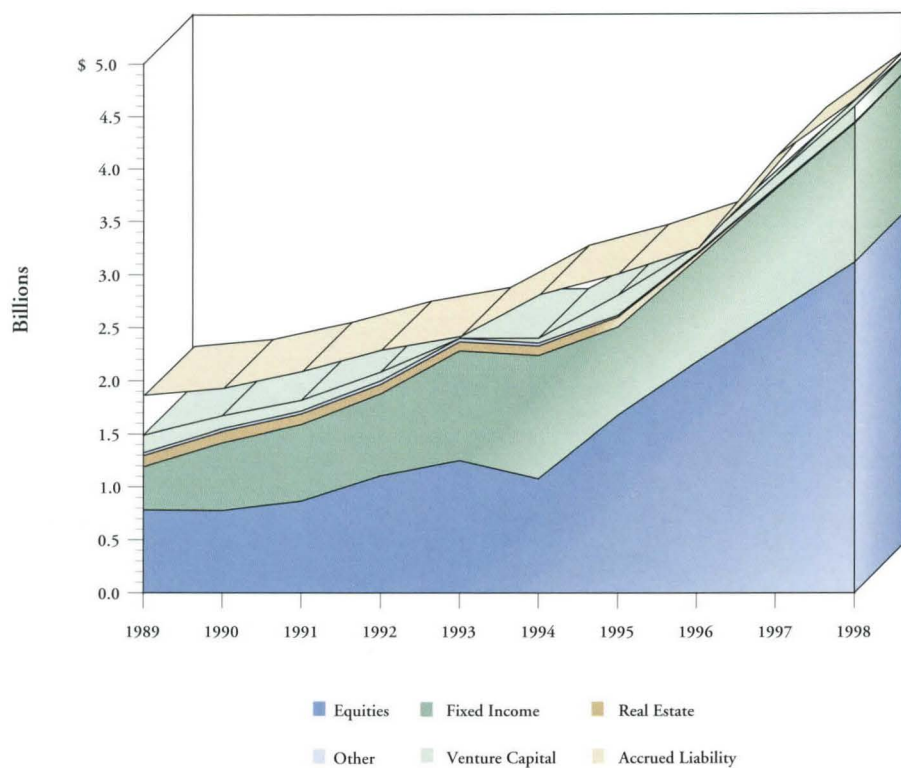
Alaska-2	Israel-1
Argentina-1	Mexico-1
Canada-1	New Zealand-2
Columbia, South America-1	Puerto Rico-1
England-1	South Korea-1
Germany-2	Sweden-1
Hawaii-1	
Ireland-1	

# Missouri State Employees' Retirement System

## Pension Trust Funds

### Net Assets vs. Pension Liabilities

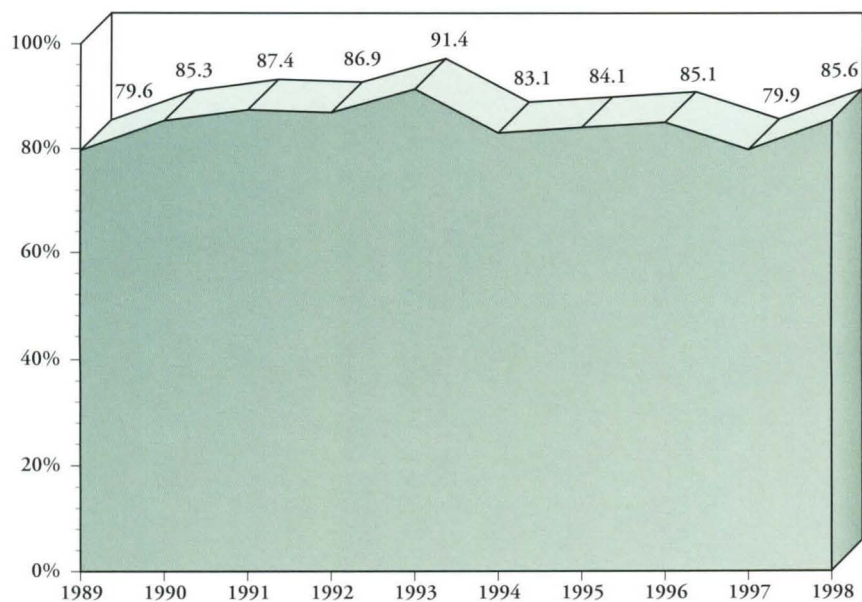
Ten Years Ended June 30, 1998



# Missouri State Employees' Retirement System

## Valuation Assets as Percents of Pension Liabilities

Ten Years Ended June 30, 1998



*Pension Trust Funds*  
*Ten Year Historical Data*

*Missouri State Employees' Plan*

Additions by Source

Fiscal Year	Employer Contribution Rate	Employer Contributions as a Percent of Covered Payroll	Employer Contribution Amount	Employer Contributions Service Transfers	Member Payments for Purchasing Service Credit	State Reimbursements of Non-funded Benefits	Net Investment Income	Other	Total
1989	9.90%	9.96%	\$ 89,177,022	\$ 4,274,011	\$ 376,701	\$ 407,569	\$ 209,858,847	\$ 20,901	\$ 304,115,051
1990	9.90	9.87	98,135,838	770,697	715,433	0	140,370,991	204,872	240,197,831
1991	9.90	10.01	102,854,950	8,459,034	446,286	0	95,945,092	9,569	207,714,931
1992	9.65	9.77	100,672,145	112,988	321,713	0	230,191,287	6,560	331,304,693
1993	9.68	9.69	102,988,219	117,466	547,961	0	293,481,441	6,047	397,141,134
1994	9.49	9.48	106,681,308	78,554	765,977	0	(15,865,184)	411,469	92,072,124
1995	9.04	9.08	108,902,372	170,081	753,984	0	393,915,517	0	503,741,954
1996	10.69	10.81	137,007,112	135,598	726,527	0	453,955,454	9,129	591,833,820
1997	10.66	10.77	146,383,371	2,238,691	640,590	0	653,958,265	235,279	803,456,196
1998	10.40	10.42	152,090,687	36,908	1,035,738	0	661,480,958	14,925	814,659,216

*Missouri State Employees' Plan*

Deductions by Type

Fiscal Year	Benefits	Contribution Refunds	Service Transfers	Administrative	Legal Settlements	Total
1989	\$ 48,569,419	\$ 4,298	\$ 0	\$ 1,496,855	\$ 0	\$ 50,070,572
1990	54,720,308	11,169	0	1,831,797	0	56,563,274
1991	60,796,849	19,297	0	2,318,369	0	63,134,515
1992	67,850,658	12,508	0	2,333,634	0	70,196,800
1993	75,606,809	22,007	0	2,441,067	0	78,069,883
1994	84,482,785	1,598	16,252	3,336,941	0	87,837,576
1995	96,198,413	0	0	3,060,262	0	99,258,675
1996	115,627,764	0	30,327	3,221,578	23,148,000	142,027,669
1997	126,941,341	102	2,091,233	3,563,018	0	132,595,694
1998	149,261,681	1,514	0	4,500,944	18,998	153,783,137



*Pension Trust Funds*  
*Ten Year Historical Data*

*Administrative Law Judges' and Legal Advisors' Plan*

Additions by Source

Fiscal Year	Employer Contribution Rate	Employer Contributions as a Percent of Covered Payroll	Employer Contribution Amount	Net Investment Income	Other	Total
1989	24.98%	27.44%	\$ 513,199	\$ 499,463	\$ 78	\$ 1,012,740
1990	30.17	31.66	605,577	387,076	530	993,183
1991	26.61	27.20	527,648	254,734	25	782,407
1992	25.51	28.00	500,250	601,626	0	1,101,876
1993	27.77	28.42	548,707	766,887	16	1,315,610
1994	24.18	23.97	502,019	(45,152)	1,056	457,923
1995	22.50	23.00	498,233	986,426	0	1,484,659
1996	21.16	20.26	548,276	1,122,107	23	1,670,406
1997	22.60	22.78	652,709	1,614,183	34	2,266,926
1998	19.66	20.11	564,295	1,613,880	36	2,178,211

*Administrative Law Judges' and Legal Advisors' Plan*

Deductions by Type

Fiscal Year	Benefits	Administrative	Legal Settlements	Total
1989	\$ 163,327	\$ 3,734	\$ 0	\$ 167,061
1990	191,534	4,734	0	196,268
1991	317,374	6,045	0	323,419
1992	399,463	6,085	0	405,548
1993	502,310	6,401	0	508,711
1994	565,082	8,566	0	573,648
1995	600,650	7,663	0	608,313
1996	633,527	7,963	0	641,490
1997	616,859	8,795	0	625,654
1998	677,213	10,981	46	688,240

*Pension Trust Funds*  
*Ten Year Historical Data*

*Judicial Plan*

Additions by Source

Fiscal Year	Employer Contribution Rate	Employer Contributions as a Percent of Covered Payroll	Employer Contribution Amount
1989	Non-funded	22.69%	\$ 5,142,127
1990	Non-funded	23.87	5,838,700
1991	Non-funded	25.53	6,572,690
1992	Non-funded	27.78	7,335,579
1993	Non-funded	29.01	7,728,160
1994	Non-funded	30.38	8,205,509
1995	Non-funded	32.84	9,188,599
1996	Non-funded	33.13	9,907,505
1997	Non-funded	33.00	10,450,270
1998	Non-funded	35.24	11,433,457

*Judicial Plan*

Deductions by Type

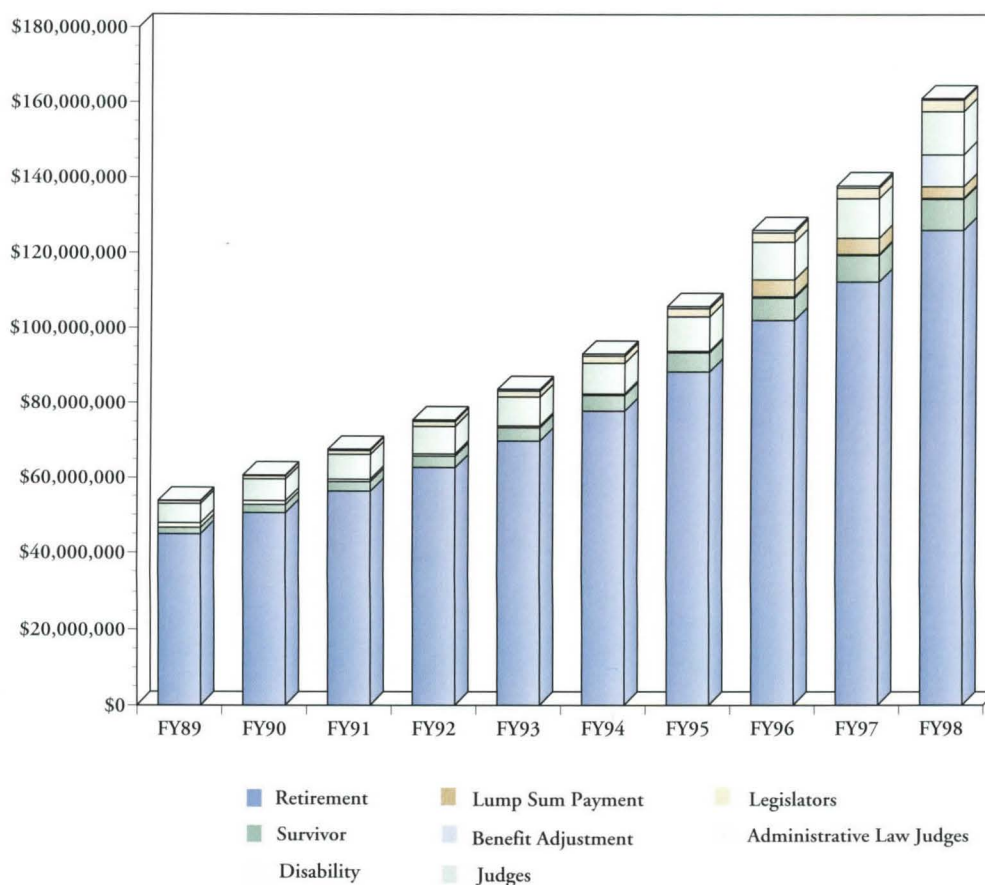
Fiscal Year	Benefits
1989	\$ 5,142,127
1990	5,838,700
1991	6,572,690
1992	7,335,579
1993	7,728,160
1994	8,205,509
1995	9,188,599
1996	9,907,505
1997	10,450,270
1998	11,433,457

*Benefit Expenses by Type*  
*Last Ten Fiscal Years*

	FY98	FY97	FY96	FY95	FY94
Retirement	\$ 126,121,327	\$ 112,523,766	\$ 102,257,950	\$ 88,532,996	\$ 78,018,158
Survivor	8,233,831	7,036,816	6,001,028	5,146,981	4,202,875
Disability	279,208	310,693	347,589	379,382	436,022
Lump sum payment	3,130,459	4,258,380	4,494,184	0	0
Benefit adjustments	8,453,580	0	0	0	0
Judges	11,433,457	10,450,270	9,907,505	9,188,599	8,205,509
Legislators	3,043,276	2,811,686	2,527,014	2,139,053	1,825,730
Administrative law judges	677,213	616,859	633,527	600,650	565,082
Totals	161,372,351	138,008,470	126,168,797	105,987,661	93,253,376

	FY93	FY92	FY91	FY90	FY89
Retirement	\$ 70,002,701	\$ 62,868,259	\$ 56,451,361	\$ 50,622,879	\$ 44,961,595
Survivor	3,533,845	3,081,500	2,566,480	2,178,282	1,653,244
Disability	484,806	566,322	659,961	996,712	1,210,440
Lump sum payment	0	0	0	0	0
Judges	7,728,160	7,335,579	6,572,690	5,838,700	5,142,127
Legislators	1,585,456	1,334,577	1,119,047	922,435	714,248
Administrative law judges	502,310	399,463	317,374	191,534	163,327
Totals	83,837,278	75,585,700	67,686,913	60,750,542	53,844,981

**Benefit Expenses by Type**





Missouri State Employees' Retirement Plan  
*Benefits Payable June 30, 1998*  
*Tabulated by Option and Type of Benefit*

Type of Benefit	Number	Annual Funded Benefits	Average Annual Benefits
<i>Service retirement</i>			
Life annuity	8,285	\$ 63,016,572	\$ 7,606
50% joint and survivor	4,263	46,560,324	10,922
75% joint and survivor	19	176,304	9,279
100% joint and survivor	1,708	20,867,772	12,218
5 year certain and life	161	1,362,132	8,460
10 year certain and life	167	1,287,216	7,708
Survivor beneficiary	717	4,683,288	6,532
Total	15,320	137,953,608	9,005
<i>Disability retirement</i>			
	67	270,924	4,044
<i>Death-in-service</i>			
	864	4,251,804	4,921
Grand totals	16,251	\$ 142,476,336	\$ 8,767

*Average Monthly Benefit Amounts*  
*Six Years Ended June 30, 1998*

	FY93	FY94	FY95	FY 96	FY97	FY98
<i><b>Regular</b></i>						
Member	\$ 516	\$ 546	\$ 623	\$ 661	\$ 703	\$ 757
Survivor	315	341	373	403	437	472
Disability	262	281	303	321	325	338
<i><b>Legislators</b></i>						
Member	1,055	1,083	1,350	1,380	1,401	1,417
Survivor	424	447	501	579	571	637
<i><b>ALJs</b></i>						
Member	2,639	2,659	2,795	2,907	2,929	3,019
Survivor	917	917	1,009	1,049	1,303	1,355
<i><b>Judges</b></i>						
Member	3,006	3,127	3,248	3,361	3,517	3,705
Survivor	882	918	1,001	1,095	1,186	1,278
Disability	0	0	0	3,169	3,359	3,462

*Missouri State Employees' Plan  
Retirees and Beneficiaries as of June 30, 1998  
Tabulated by Year of Retirement*

<b>Year of Retirement</b>	<b>Number</b>	<b>Total Annual Benefits</b>	<b>Average Monthly Benefit</b>
1964 & Prior	15	\$ 78,804	\$ 438
1965	12	49,224	342
1966	12	63,324	440
1967	15	79,776	443
1968	21	123,168	489
1969	31	193,464	520
1970	54	301,692	466
1971	54	296,544	458
1972	96	591,708	514
1973	169	973,572	480
1974	164	834,636	424
1975	203	1,277,592	524
1976	274	1,570,428	478
1977	262	1,659,348	528
1978	240	1,386,768	482
1979	245	1,526,532	519
1980	303	1,974,240	543
1981	402	2,737,344	567
1982	486	3,374,580	579
1983	485	3,485,604	599
1984	447	3,114,072	581
1985	531	3,876,192	608
1986	602	4,329,588	599
1987	663	5,511,816	693
1988	767	7,321,896	796
1989	741	7,013,232	789
1990	730	7,393,476	844
1991	918	9,495,900	862
1992	888	8,777,772	824
1993	1,078	10,789,692	834
1994	974	8,804,244	753
1995	1,311	13,425,936	853
1996	1,142	11,187,240	816
1997	1,306	13,173,456	841
1998	610	5,683,476	776
	16,251	\$ 142,476,336	\$ 731

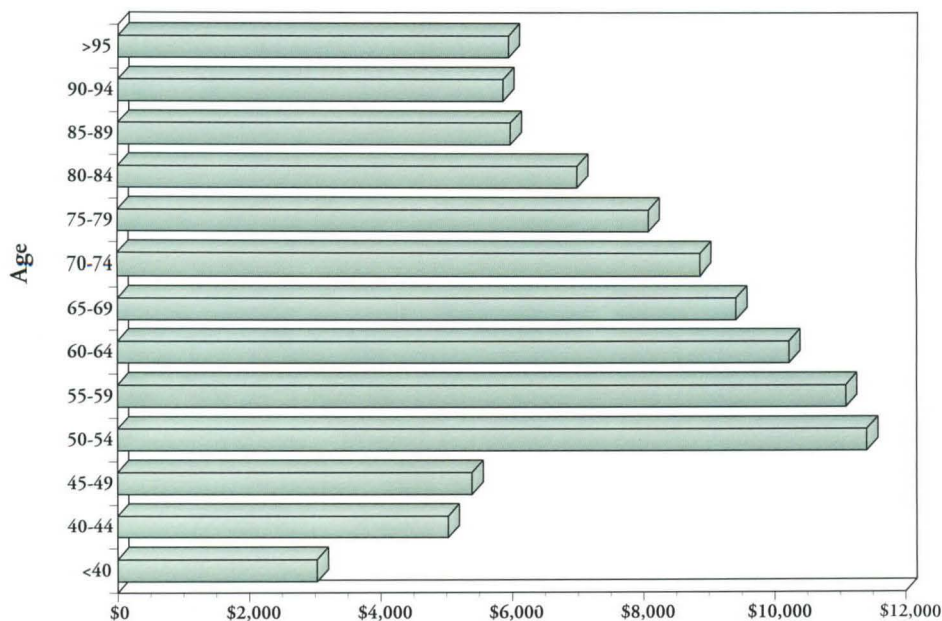


*Missouri State Employees' Plan*  
*Total Benefits Payable June 30, 1998*  
*Tabulated by Attained Ages of Benefit Recipients*

Attained Age	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Totals	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20					50	\$ 99,756	50	\$ 99,756
20-24					10	20,280	10	20,280
25-29					4	18,588	4	18,588
30-34					10	58,764	10	58,764
35-39					21	90,540	21	90,540
40-44			1	\$ 1,596	50	254,904	51	256,500
45-49			8	37,248	91	496,536	99	533,784
50-54	209	\$ 3,045,468	11	35,640	101	581,340	321	3,662,448
55-59	846	10,066,644	20	74,484	139	1,002,912	1,005	11,144,040
60-64	1,979	21,149,940	24	111,444	207	1,333,548	2,210	22,594,932
65-69	3,418	33,014,640	3	10,512	234	1,388,820	3,655	34,413,972
70-74	3,206	29,131,644			232	1,367,256	3,438	30,498,900
75-79	2,321	19,218,468			192	1,095,168	2,513	20,313,636
80-84	1,521	10,910,244			151	776,724	1,672	11,686,968
85-89	757	4,626,336			62	265,812	819	4,892,148
90-94	278	1,687,128			23	76,380	301	1,763,508
95	20	119,484			2	3,720	22	123,204
96	21	146,940			1	2,904	22	149,844
97	11	77,076			1	1,140	12	78,216
98	9	41,100					9	41,100
99	2	6,516					2	6,516
100	2	14,976					2	14,976
101	1	6,720					1	6,720
103	2	6,996					2	6,996
Totals	14,603	\$ 133,270,320	67	\$ 270,924	1,581	\$ 8,935,092	16,251	\$ 142,476,336

Average Age at Retirement 62.6 years  
Average Age Now 71.1 years

**Average Annual Benefits**

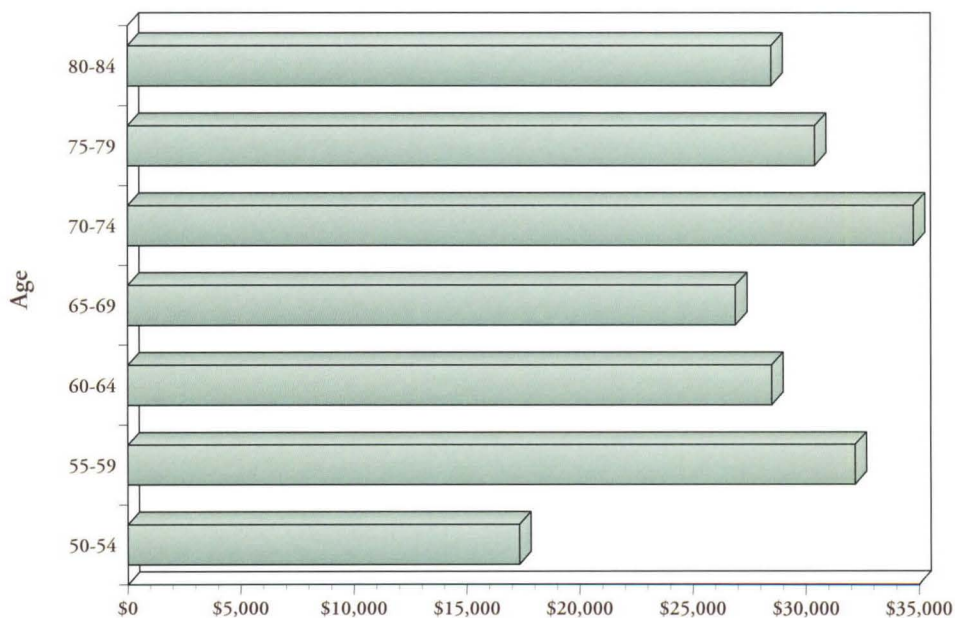


*Administrative Law Judges' and Legal Advisors' Plan*  
*Total Benefits Payable June 30, 1998*  
*Tabulated by Attained Ages of Benefit Recipients*

Attained Age	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Totals	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
50-54					1	\$ 17,316	1	\$ 17,316
55-59	1	\$ 32,172					1	32,172
60-64	1	40,188			1	16,776	2	56,964
65-69	3	87,276			1	20,280	4	107,556
70-74	6	238,776			1	4,500	7	243,276
75-79	3	116,640			2	35,316	5	151,956
80-84	2	65,748			1	19,656	3	85,404
Totals	16	\$ 580,800	0	\$ 0	7	\$ 113,844	23	\$ 694,644

Average Age at Retirement 64.9 years  
Average Age Now 71.6 years

**Average Annual Benefits**



# Judicial Plan

Total Benefits Payable June 30, 1998

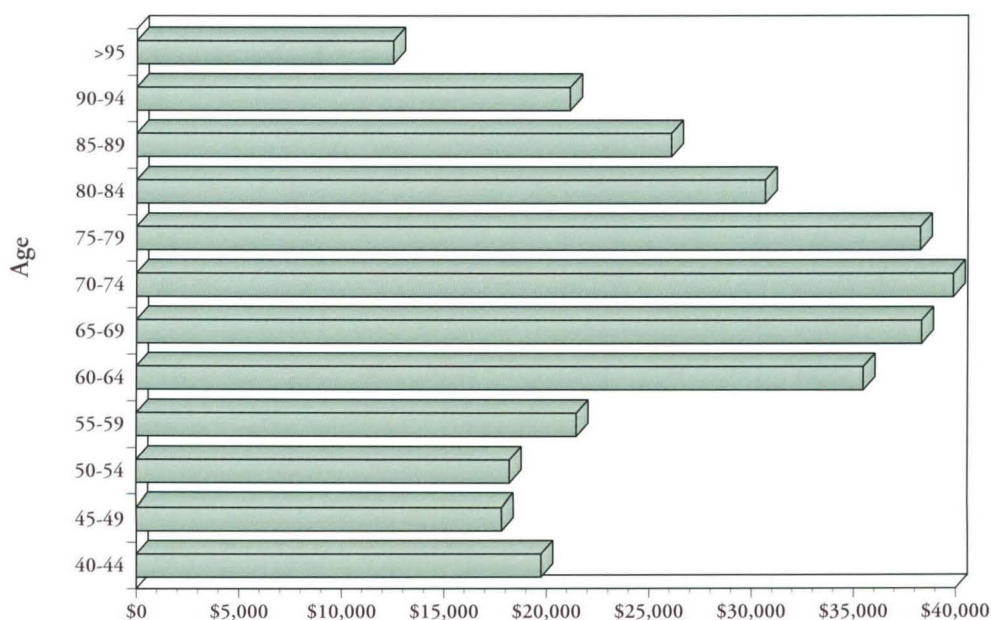
Tabulated by Attained Ages of Benefit Recipients

Attained Age	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Totals	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
40-44					1	\$ 19,740	1	\$ 19,740
45-49					3	53,472	3	53,472
50-54					8	145,680	8	145,680
55-59					5	107,340	5	107,340
60-64	15	\$ 595,776			4	78,204	19	673,980
65-69	42	1,808,724			8	107,964	50	1,916,688
70-74	63	2,928,312			20	381,456	83	3,309,768
75-79	50	2,289,252			17	273,948	67	2,563,200
80-84	27	1,212,648			24	351,600	51	1,564,248
85-89	16	701,040			19	211,632	35	912,672
90-94	6	252,912			11	106,392	17	359,304
95 and over					3	37,512	3	37,512
Totals	219	\$ 9,788,664	0	\$ 0	123	\$ 1,874,940	342	\$ 11,663,604

Average Age at Retirement 64.1 years

Average Age Now 75.5 years

Average Annual Benefits





*Internal Service Fund*  
*Ten Year Historical Data*

*Revenues by Source*

Fiscal Year	Employer Contributions*	Member Contributions*	Investment Income*	Optional Life Premium Receipts	Basic Life Premium Receipts	LTD Premium Receipts	HMO Premium Receipts*	Premium Retention for Operating Expenses*	Miscellaneous Income	Settlements Net of Legal Expense	Other	Total
1989	\$ 45,111,161	\$ 15,548,221	\$ 898,264	\$ 3,332,531	\$ 1,885,927	\$ 5,282,647	\$ 12,433,348	\$ 304,088	\$ (26)	\$ 0	\$ 0	\$ 84,796,161
1990	46,378,087	15,658,445	1,927,530	3,968,140	2,164,340	5,369,083	16,109,220	347,313	742	0	0	91,922,900
1991	48,641,390	16,954,753	2,191,155	4,305,953	2,243,495	4,966,782	14,598,356	357,329	(2,893)	0	0	94,256,320
1992	51,919,719	18,802,967	2,114,338	4,412,743	2,268,739	4,938,383	12,663,887	347,710	542	0	0	97,469,028
1993	62,080,566	21,380,567	693,202	4,551,873	2,365,344	5,003,490	16,429,142	365,106	1,340	0	0	112,870,630
1994	37,918,127	11,513,810	384,795	4,862,255	2,520,938	5,265,812	8,308,277	355,642	3,534	0	0	71,133,190
1995	0	0	79,215	5,535,334	2,801,939	5,650,682	0	275,646	0	205,411	0	14,548,227
1996	0	0	81,687	5,924,096	2,037,618	6,148,535	0	396,889	0	0	0	14,588,825
1997	0	0	50,608	6,319,662	3,224,533	6,711,653	0	379,683	1	0	0	16,686,140
1998	0	0	58,889	7,116,370	3,656,443	5,947,386	0	423,378	41	0	0	17,202,507

\* The Missouri State Employees' Medical Care Plan operations were transferred to the Missouri Consolidated Health Care Plan January 1, 1994.

*Internal Service Fund  
Ten Year Historical Data*

*Expenses by Type*

Fiscal Year	Medical Claims*	Administrative*	Optional Life Premium Disbursements	Basic Life Premium Disbursements	LTD Premium Disbursements	HMO Premium Disbursements	Premium Refunds*	Basic Life Death Benefits	Other	Total
1989	\$ 50,881,898	\$ 2,985,644	\$ 3,309,173	\$ 1,860,544	\$ 5,281,829	\$ 12,379,289	\$ 235,973	\$ 56,000	\$ 0	\$ 76,990,350
1990	49,407,467	4,933,409	3,940,775	2,163,524	5,366,952	16,040,850	225,735	6,000	0	82,084,712
1991	67,969,018	5,814,424	4,269,303	2,242,193	5,915,818	14,537,336	212,825	2,000	0	100,962,917
1992	83,674,959	5,291,117	4,375,115	2,267,723	5,136,992	12,609,838	227,967	0	0	113,583,711
1993	83,281,386	6,055,713	4,514,821	2,365,344	5,002,115	16,386,136	267,792	0	0	117,873,307
1994	23,005,156	3,336,388	4,825,723	2,519,343	5,264,677	8,284,843	152,961	0	0	47,389,091
1995	0	349,835	5,482,421	2,799,469	5,648,930	0	57,161	5,000	0	14,342,816
1996	0	330,702	5,874,317	3,023,323	6,146,610	0	53,652	0	0	15,428,604
1997	0	363,276	6,269,758	3,222,327	6,708,212	0	55,550	0	0	16,619,123
1998	0	470,791	7,053,924	3,654,416	5,945,374	0	66,485	0	0	17,190,990

\* The Missouri State Employees' Medical Care Plan operations were transferred to the Missouri Consolidated Health Care Plan January 1, 1994.

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